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INTERNATIONAL photographer

Vol. 11 September, 1939 No. 8

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On the Cover

Mr and Mrs Robert Taylor (Barbara Stanwyck) at home. Photographed on their San Fernando Valley ranch by Durward Grayhill, stillman member of Local 659, IATSE, and staff photographer at MGM

Editor, ED GIBBONS, *Managing Editor*, HERBERT ALLER, *Art Editor*, JOHN CORYDON HILL, *Business Manager*, HELEN BOYCE

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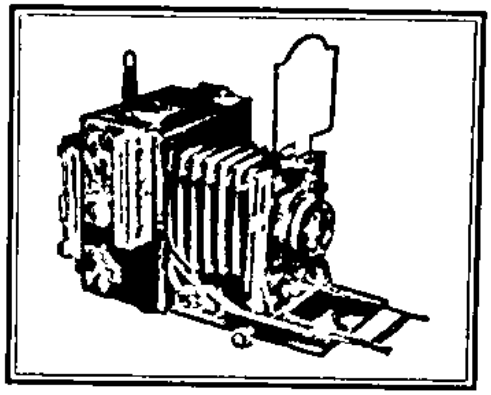
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INTERNATIONAL PHOTOGRAPHER as the monthly official publication of International Photographers Local 659, of the International Alliance of Theatrical Stage Employees and Moving Picture Machine Operators of the United States and Canada, not only represents the entire personnel of photographers engaged in professional production of motion pictures in the United States and Canada, but also serves technicians in the studios and theatres, who are members of the International Alliance, as well as executives and creative artists of the production community and executives and engineers of the manufacturing organizations serving the motion picture industry INTERNATIONAL PHOTOGRAPHER assumes no responsibility for the return of unsolicited manuscripts or material

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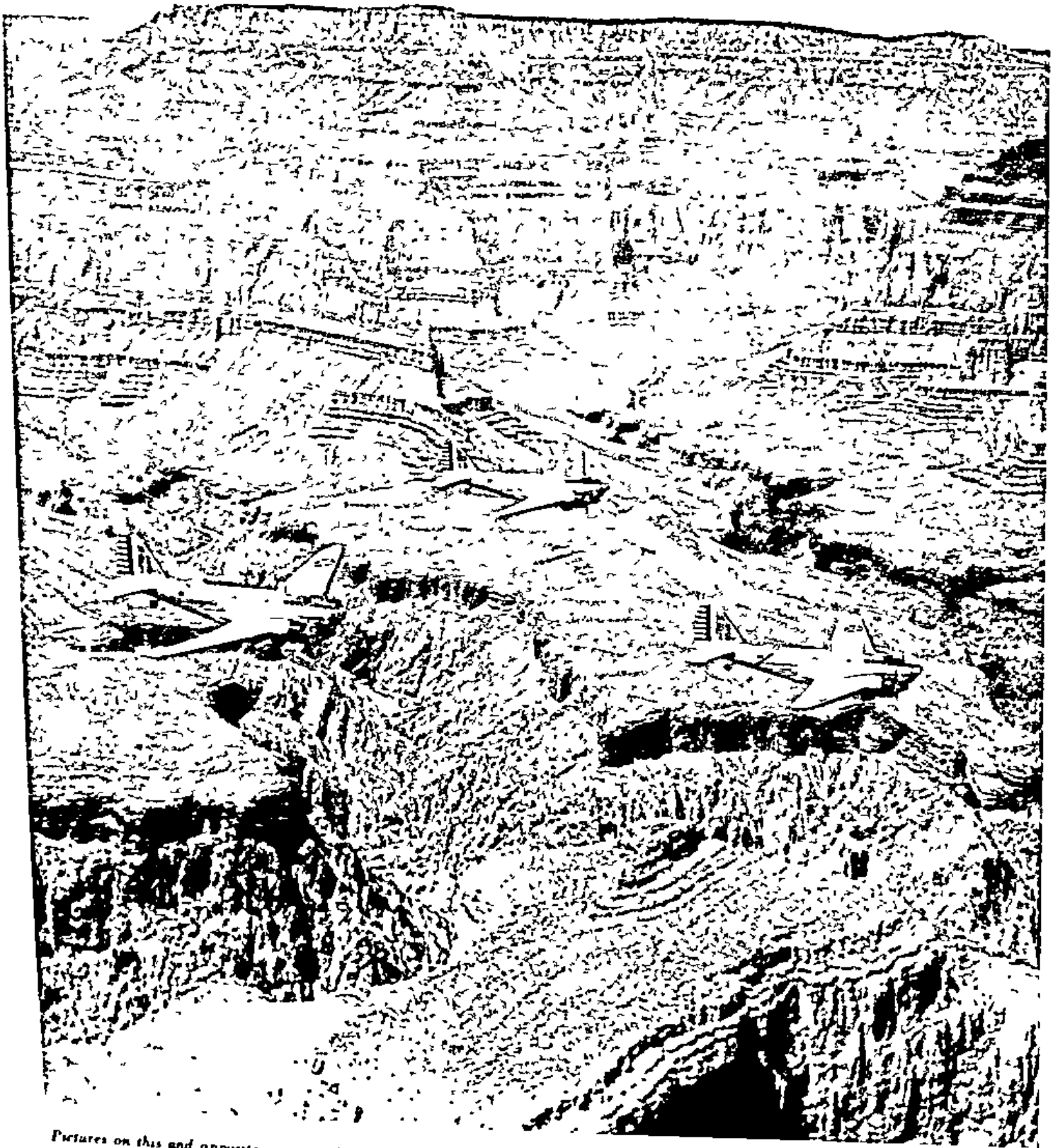
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Pictures on this and opposite page are from Universal Newsreel clips of latest type U. S. Army bombers in action. Above is a flight

International PHOTOGRAPHER

Only International Professional Journal of Motion Picture Arts & Crafts

vive La vincennes

With Europe engaged in another war that bids to outdo the last World War in spectacular use of the camera to record cruel events for history and to fit into military strategy in many ways, this article is very timely.

By NORMAN ALLEY

ANOTHER BIG WAR in Europe! Everywhere in America the Man on the Street stares at glaring newspaper headlines and asks of the man next to him 'Do you think we'll get in it?"

They go their separate ways and home to dinner drink a second cup of coffee absently, as the wife turns on the radio " This is John Blank, Berlin correspondent for Dilapidated Press—speaking to you from the galvanized press coop on Wilhelmstrasse Unter den Linden Adolph Hitler self styled first soldier of the Reich, announced this morning that . "

The wife leaves the dishes stacked high in the sink, they both go to a movie The newsreel comes on A clip is shown of Nazi troops pounding on Warsaw It changes to French Blue devils taking up their positions in the Maginot line Then comes a spectacular shot of an air raid over London, as children with tags on their lapels are led in a mad exodus for the country

"How do they get those pictures?" the wife wants to know

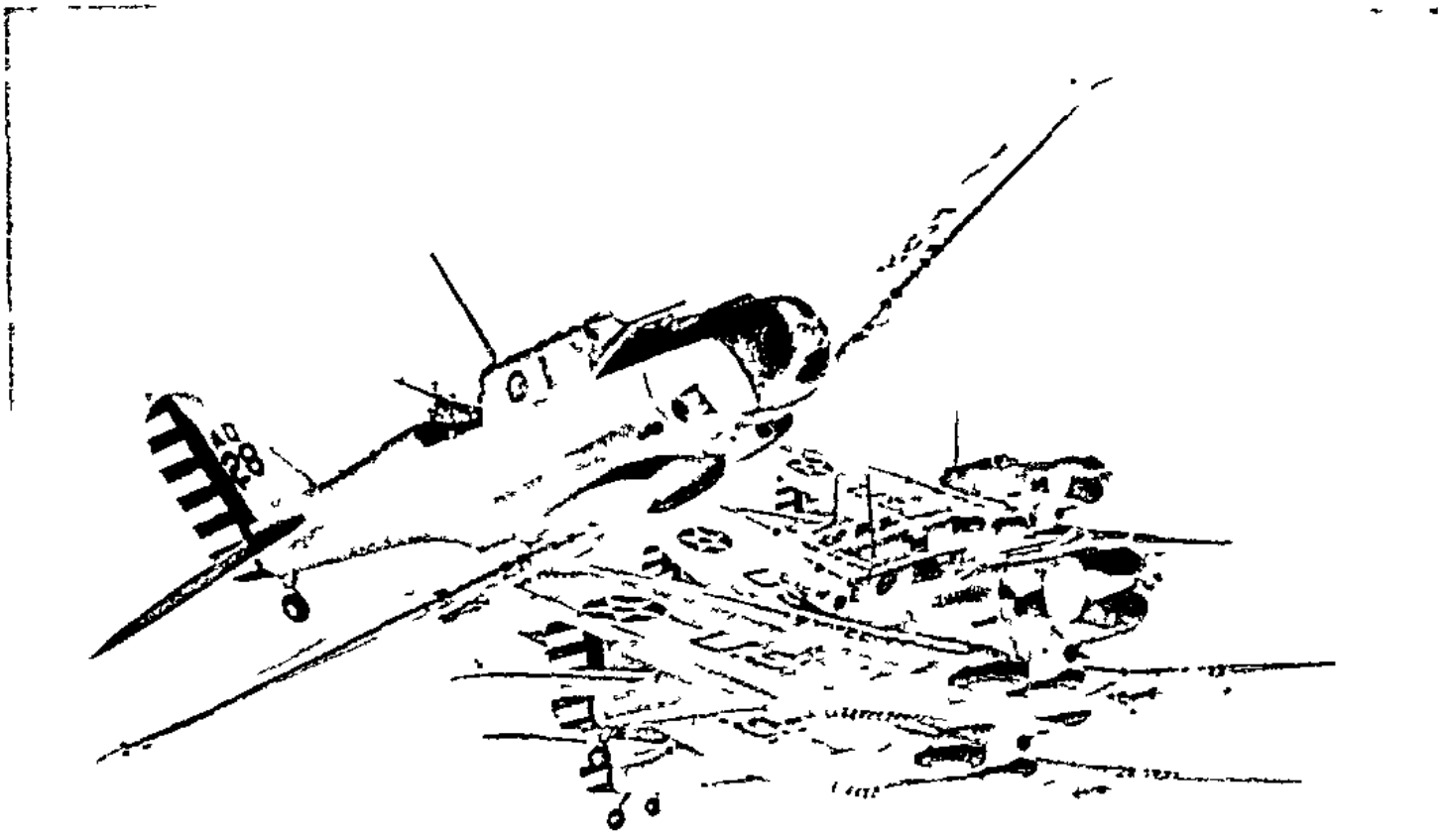
"They take them!" growls the husband 'With a camera!'

"I know that, dear," she says, defensively "But do they go right up there in the front lines? Seems to me it would be dangerous"

'Yeah, but it's fun Wish I was a cameraman Just take pictures, while the other suckers fight, sleep in water up to their necks and drag cannons around!

'Doesn't the cameraman have to put up with any of the front line hardships?"

"Naah!" says the husband 'Do you



formation photographed below the top of Grand Canyon On next page lead plane is "peeling off" as attack signal

shoulders to the wheel in the same division

I've already mentioned Pete Then let's see As I clear my throat, I must think of Wooster Lambert still fighting the nation's halitosis with Listerine at St Louis Dick Sears, news camera for Universal in New England Ernest Shoedsack now famous for the direction of Hollywood's most *unusual features* Mark Bara *an industrial* engineer at Providence R I Larry Darmour one of Hollywood's best dollar stretching producers, Victor Fleming a big director of super productions for the M G M lion to roar about Al Kaufman production executive Johnny Swain laboratory contact at *RKO* Harry Thorpe Bureau of Identification L A Police Dept George Teague, Universal process *expert*, Willard Vanderveer with Pete Smith's novelty shorts MGM Len Bull Moose Smith camera ace at MGM Charlie Downs major domo of N Y Cameramen's Local No 644 IATSE.

Earl Hines Harry Davis Tom Galligan, Reggie Lyons Ed Schneider cameramen in studio production George Marshall ace director at Universal Gare Schwartz experimenting with the theories of multiple dimension in Paris Jeff Dickson who also stayed in Paris and became the Tex Rickard of Europe, Al Mann director for Paramount Wesley Ruggles one of the very tops among movie megaphoners" Chubby Lehmann newsreeling for Movietone in Southern California Charlie Ford producing for Republic Norman Sper kicking football goals for Liberty Magazine Ira Morgan production cameraman —as is Gus Peterson Lewis Milestone ace director

Billy Williams is now a process expert at RKO Jim Brown is photographing for *Darmour* Vic Carlson traffic dept So Calif Telephone Co Bill Abousselman France's leading radio manufacturer Bill Hamilton film editor RKO Hal Mohr ace cameraman and president of our Local Frank Lyddell famous radio hill billy L W O'Connell cameraman at *Warners* Roland Price *producer* cameraman Eddie White associate producer at *Republic* Otho Lovering *associate producer* with Walter Wanger

Farciot Edouart, process supervisor at Paramount Charlie Fogel superintendent of exchange prints Mai E J Hardy in politics at *Berkeley* J N Hillhouse—now a Reverend—who runs a desert sanitarium at Phoenix Courtney Munson Bureau of Identification Pasadena Police Dept A P Waxman Warner Bros Publicity Johnny Waters *assistant director at MGM* Jack "Gagstick Wagner Hollywood's famous gagman Duke Zalibra photography L A Board of Education Ed Waskow furniture Paul Vogel camera at MCM Al Wetzel camera Bernie Loper theatre manager Los Angeles Al Romell, photography Southern Pacific R.R. Walter *Bell 8mm expert with Gavaert* A F Goldsborough Pasadena rifle expert and Felix Shoedsack, brother to Ernest—a production cameraman and gentleman farmer

There were others who have gone west What a bunch to have in any man's army peace or war Some of them are perhaps a little too much around the waist line etc., today—but if trouble should *break out tomorrow* I'd bet dollars to doughnuts that they'd be fighting for a chance to get right back in there and do the same thing over again What's more they'd give an account of themselves that would stack up and I'd vouchsafe surpass any aggregation of young aspirants that might arise to contest their right to the title of the greatest aggregation of camera talent ever assembled under one tent!

Viva La Vincennes!



Shots like these both actual scenes from the last World War will be the material from which newsreelers and army photographers will make their records of the new conflict Top scene was shot during action somewhere in France while the bottom shot shows the spectacular keeling over of a torpedoed transport

STUDIO GRIP EQUIPMENT

Instructive presentation of outstanding grip equipment developed at Samuel Goldwyn studios by Alex Hume and his competent aides in grip department; not found at other lots, camera tripod and equipment box of special note

By GEORGE M HAINES
Local 80 IATSE

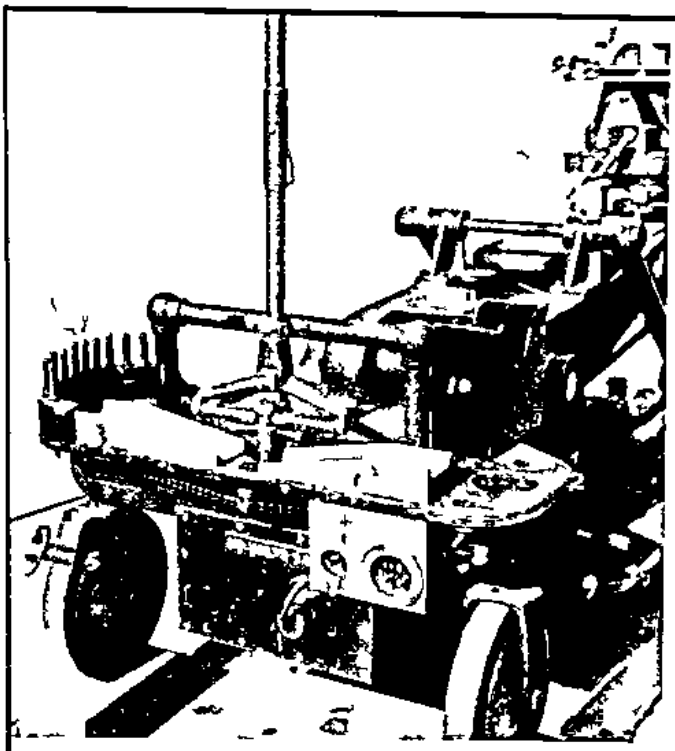
WHEN VIEWING equipment at Samuel Goldwyn Studios one is impressed by efficiency of each piece of equipment in the grip department, which is ably handled by Alex Hume head of the department Alex with many years behind him at the Goldwyn lot has organized a very smooth running department, in fact one of the best Many of the studios could profit by observing some of the methods employed in the Goldwyn grip department, handled by a man whose equipment ideas and understanding of labor contribute much to the well being of his organization.

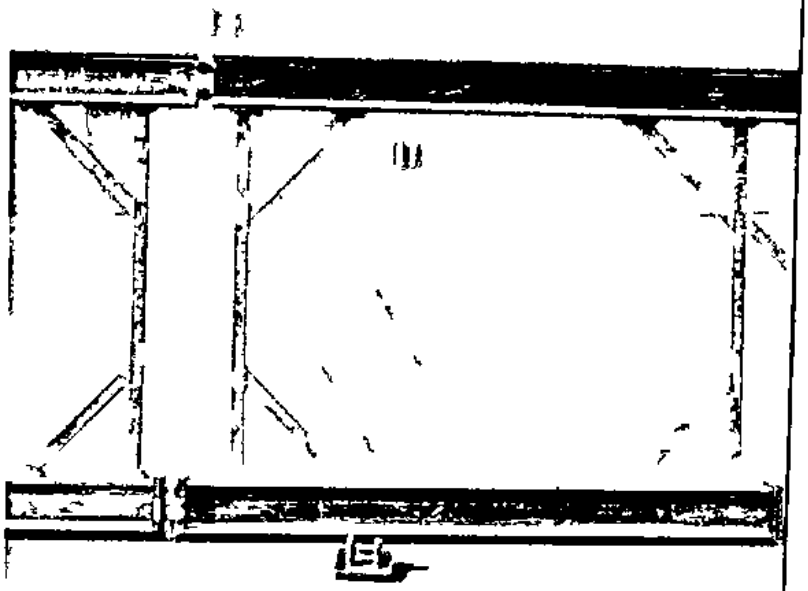
In Ralph Hoag Hume has an able key grip as demonstrated by his contributions to the industry many of which have been adapted by other studios. Pictured here are some of his inventions including Hoag Hydraulic Tripod efficient light Jumbo stand grip box duralumin adjustable track extension leg point chuck Hoag is now working on several ideas which when completed will fill a real need in the industry He has spent 10 years with Goldwyn and free lanced for five We hope in future to give our readers additional information on the Goldwyn equipment

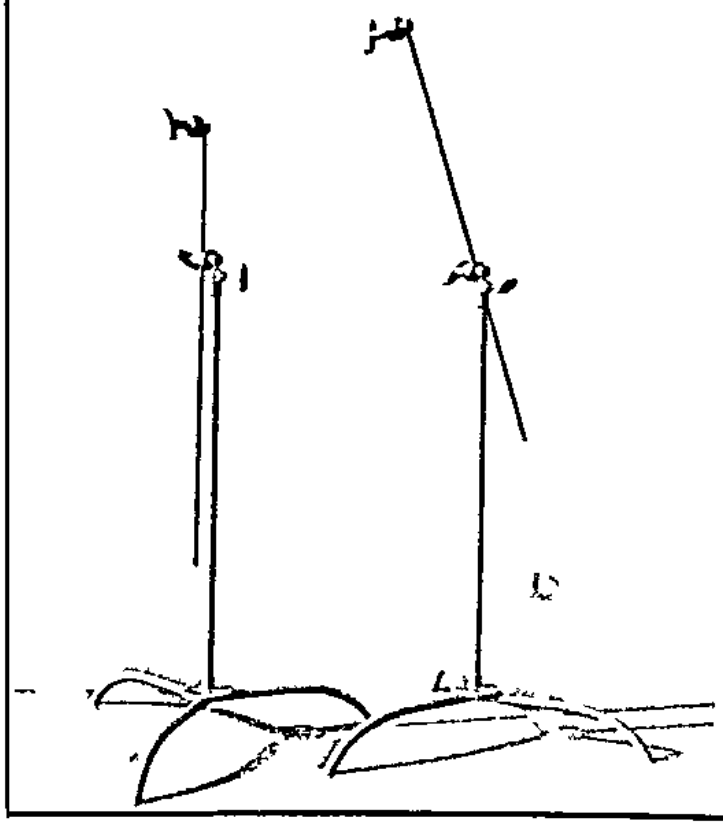
Equipment described is keyed by numerals in accompanying layout of pictures.

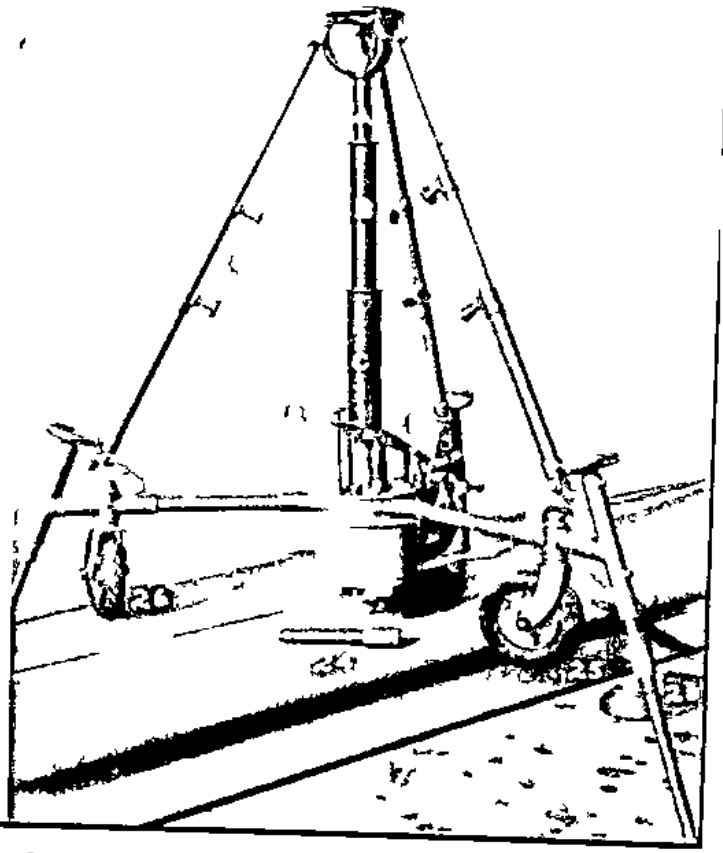
1. Velocipede sound synchronizing unit
2. Connection for follow focus unit with electrical motors.
3. Duralumin inclines for track.
4. Connecting pins or dowels for dolly track
5. Foot control velocipede wheel brake
6. Rheostat control for electrical elevation of velocipede camera arm.
7. Off-center camera plate crank.
8. Connection for camera arm control unit
9. Manual camera arm crank.
10. Accessories box
11. Duralumin adjustable dolly track
12. Protection caps for track ends to protect dowel lock holes when not in use
13. Caps as when track is not in use
14. Connecting dowel lock pins as inserted when additional track is used.
15. Adjustable track spreaders.
16. Bronze century stand—bronze fittings, or dogs, with satin finish (a process of rust proofing)
17. Hoag Hydraulic tripods with satin finish
18. Pressure release valve for decreasing height of camera.
19. A B C — three extensions for elevating camera











Pictures on this and opposite page made exclusively for INTERNATIONAL PHOTOGRAPHER *by Robert Coburn*

20 Guy rod dog for tilting off when camera set
21 Hydraulic foot pump for elevating camera tripod
22. Tripod tie-off dog
23 Extension tripod leg point
24 One of two adjustable leg points.
25 Tripod point inserted in chuck (similar to bicycle chuck)
26 Pneumatic wheel tire
27 Camera base plate head
A Adjustable high hat plate
30 Tie-off dog and elevation arm for adjusting high hat base plate adjusted to 50 per cent of its adjustment
31 Off center camera extension plate
32 Removal high hat on adjustable plate
34. Adjustable height camera stool
35 Claw dog for various heights.
36 Jumbo stand with overhead blade Grip impicture is Jess Wilson member of Local 80 IATSE.
37 Wheel locks.
38. Tie off Jumbo stand elevation dogs

39 Adjustable blade extension
40 Sliding blade Grip in picture is Jess Wilson
41. Grip equipment box. "Denver" H. R. Brandon, Local 80 IATSE, is grip in picture
42. Handy lathe with removable mounts.
43. Electrical plug in sockets.
44 Grip accessories.
A Adjustable high hat.

Notes on the above equipment.

Items 1 to 10 The placement of the sound synchronization, connecting of follow focus and camera control, incline tracks dowel pins, accessory box in the rear is a much improved feature over the usual unhandy placements of such equipment.

Item 5 Foot brake, a durable feature for efficiency in operation.

Item 6 The proper placement of the arm control makes for efficiency and convenience of cameraman or key grip

Item ~ This is to date most efficient track we have seen Its advantages over other tracks are It is constructed of duralumin permitting easy handling adjustable spreaders for any width "I" beam track eliminating the use of cumbersome base planks as "I" beam has sufficient strength to eliminate sag dowel lock pins retaining strength of "I" beam track.

Item 16. As with all Samuel Goldwyn equipment efficiency is foremost. These stands exemplify this

Item 17 The Hoag tripod. This is the much talked about hydraulic tripod that meets every demand of a cameraman. In efficiency it is unsurpassed for the following reasons Fig 21 is the hydraulic foot pump for gradual elevation of camera. Fig 18 is pressure release valve for decreasing height. Figs. 23 and 24, interchangeable extension leg points with chuck connection Fig 26, pneumatic tire permitting easy vibrationless mobile movement. Fig 20 rigid guy rods. Figs. A, B and C the hydraulic lifts permitting at least four feet more of height than the usual tripod height In the construction of this tripod the lightest metal has been used wherever possible treated with satin rust proofing.

Items 30 and A. Adjustable high hat plate and off-center extension plate A very efficient grouping of equipment for down shots. In the picture it is adjusted to 45 degree angle with base carriage slightly off center on extension plate The extension plate is a proven time saver inasmuch as the camera can be moved 18 inches off center each way, eliminating the need for a change in set up for such a required small change in angle.

Item 36. Jumbo stand with four satin rust proof height extensions and duralumin frame overhead blade. This dual purpose Jumbo stand can be elevated to 24 feet without any weight necessary at base. When blade is used, its extension is 8 feet Jumbo stand also is used with flag to gobo off light from parallel It is equipped with foot adjustment wheel locks.

Items 40 and A. Grip equipment box The most efficient box seen to date. Such a box should be on every set. Every piece of equipment and grip accessory is conveniently at hand (no digging required) Observe the lights in top eliminating the bright work light usually required On the lathe shown was turned out much of the unusual equipment used at Samuel Goldwyn Studio Pictured with box is "Denver" H R Brandon grip, who has been associated with the industry for 15 years, having spent the last nine years at Samuel Goldwyn Studio. "Denver" has utilized his past experience as a machinist to help turn out many of the Alex Hume and Ralph Hoag ideas.

MIXING WEIGHTS AND MEASURES

Chapter II from Don Hooper's volume, "Basic Photography," presenting reference worthy material on basic elements of photography, presents comprehensive data on tables, weights and measures used in profession.

By DON HOOPER

Numerals in parenthesis in the following text refer to the page numbers on which this material appeared in the original edition of "Basic Photography" A few copies still are available Turn to Page 27 for information"—Ed Note.

INTRODUCTION

(39)

The preparation of photographic solutions, from the chemicals which have been described in the previous chapter is *no haphazard process*, but calls for extreme care in each of the following procedures first, the purity of the chemicals used and the cleanliness of the containers second the proper amount of each chemical being weighed or measured out and, third, the combination of these chemicals in the proper order and their thorough mixing. There is nothing difficult or mysterious about preparing photographic formulas but poor results will often be obtained from carelessness in their preparation

The information supplied in this chapter is of such nature that it is almost impossible to memorize any great portion of it. Its main importance is to act as a ready reference in the preparation of photographic formulas. It should be read in earnest however as the general context of the chapter can be remembered and will prevent you from blindly making errors when preparing to do darkroom work.

WEIGHTS AND MEASURES

Dry chemicals (those in crystal or powder form) are always weighed to obtain the desired amounts, while the various liquid chemicals used, as well as water are almost always measured by volume In the United States and Great Britain there are two systems of weights and one of measures used in photographic work. The units of those systems with which we are concerned are given below

AVOIRDUPOIS (AV) WEIGHT

27 11/32 Grains (grs.)	1 Dram or Drachm (drm)
16 Drams (drms.)	1 Ounce (oz.)
16 Ounces (ozs.)	1 pound (lb.)
437½ Grains	1 Ounce
7,000 Grains	1 Pound

APOTHECARIES (APOTH.) (AP.) WEIGHT

20 Grains	1 Scruples (sc.)
3 Scruples (scs.)	1 Dram or 60 Grains
8 Drams	1 Ounce or 480 Grains
12 Ounces	1 Pound or 5 760 Grains

It will be noted from the above tables that considerable difference exists between these two systems of weights. However the Grain is the same in both, one grain Av having the same weight as a grain Ap All United

(40)

States formulas, which are the ones generally employed in this country, are the Avoirdupois system, and use only the grain, ounce and pound. However British formulas frequently call for Drams of a certain chemical, and in using such a formula the Apothecary's dram is meant

The following table of fluid measure is used almost entirely in this country for measuring fluid chemicals and water

60 Minims (mins.)	1 Dram or Drachm (drm)
8 Drams	1 Ounce (oz.) 480 Minims
4 Ounces	1 Gill
4 Gills	1 Pint (Pt.) 16 Ounces
2 Pints	1 Quart (Qt. 32 Ounces
4 Quarts	1 Gallon (gal.) 128 Ounces

The above system is used in Great Britain with the difference that the pint contains 20 ounces and the quart 40 ounces. This should be remembered when using British formulas One fluid ounce of water weighs one ounce Avoirdupois and as one fluid ounce contains 480 minims and one ounce Av 437½ grains, a minim of water weighs roughtly 0 91 grain The units of fluid most commonly used in photography are the minim dram, ounce quart and gallon

THE METRIC SYSTEM

In most European and in many other countries the METRIC SYSTEM of weights and measures is used. This system is much simpler than ours, easily learned and remembered, and has the following advantages over our systems

1. Decimal relationship of units.
2. Uniform and self-defined names of units
3. Simple relation to each other of units of length area volume and weight.

For this reason it is essential that the photographic student become familiar with this system The unit upon which the entire Metric System is based is called the Meter which is supposed to be one ten millionth of the distance on the earth's surface from the pole to the equator

The three BASIC UNITS of the Metric system however are as follows
METER, for Length.
GRAM, for Weight of Mass.
LITER of Capacity

The tables of this system are made up in multiples of ten. The terms used for the various measurements are the names of the three basic units, and three Greek and three Latin prefixes for each of them as follows

Prefixes			
MILLI	One-thousandth	1/1 000	.001
CENTI	One-hundredth,	1/100	.01
DECI	One tenth	1/10	1
—UNIT	One	1	1 0
DEKA	Ten	10/1	10 0
HECTO	Hundred	100/1	100 0
KILO	Thousand	1000/1	1000.0

(41)

The Metric System tables are formed by combining the prefixes with the terms for the basic units as follows

multiply 28 by 10 and divide by 80. The result is that 3.5 ounces of 80 per cent acid is added to enough water to make up a total volume of 10 ounces of which will have an acid strength of 28 per cent

Acetic acid, one of the most used of all acids in photographic chemistry, is made in different percentage strengths, the commercial about 28 per cent, the re-distilled 80 per cent, and the glacial 99 per cent Formulas often call for a solution of 28 per cent acetic acid.

THE HYDROMETER

This instrument is used to indicate the relative specific gravities of liquids, usually in what is called "degrees Baume." The hydrometer consists of a weighted glass bulb. The reading is taken at the surface of the liquid in a glass tube, from a graduated scale above the bulb The usual hydrometer for photographic work reads zero for pure water, with the readings increasing to 80, which represents the heaviest liquid that can be tested with this instrument. These readings do NOT refer to the specific gravities, but are graduations on the Baume scale which can be converted into specific gravities

It is seldom ever necessary, however, in the preparation of photographic formulas, to determine the specific gravities of liquid chemicals as they are nearly always indicated on the label of the container that they are in The main function of a hydrometer, for 95 per cent of all photographic work done today, is to test the strength of the fixing bath.

A fixing bath, when freshly made, should never test below 30 on the Baume scale of the hydrometer When it is desirable to fix negatives

rapidly, it is permissible to have the fixing bath test considerably above this. A fixing bath to be used for prints, however, should never test above 30 on the Baume scale, because if this condition prevails, the prints will tend to float in the solution and thereby are likely to become stained. Since specific gravities and consequent hydrometer readings, change with variations of temperature, hydrometer readings should always be taken at the temperature indicated on each instrument This is usually 60 degrees F

Hydrometers are fragile instruments and easily broken A slender glass jar to hold the liquid tested is supplied with each instrument. A small wad of cotton should be placed in the bottom of this jar to prevent breaking of the weighted end of the hydrometer This cotton should either be removed or thoroughly washed before and after each hydrometer reading When not in use the hydrometer should be kept in the jar

MEASURING TEMPERATURES

There are two systems for measuring temperatures, in common use, and he photographer should be familiar with each In this country and in Great Britain the Fahrenheit (F) scale is the standard In practically all ther countries the Centigrade (C) scale has been adopted, and is steadily ecoming popular in this country Following is a comparison of the two ystems

FAHRENHEIT		CENTIGRADE	
Freezing point of water	320°	Freezing point of water	0°
Boiling point of water	212°	Boiling point of water	100°
Degrees freezing to boiling	180°	Degrees freezing to boiling	100°

From the above it will be seen that the Centigrade system has a more logical scale arrangement than the Fahrenheit.

TEMPERATURE CONVERSIONS

Conversions from one to the other of the above temperature scales are often required and are easily made as follows

FAHRENHEIT TO CENTIGRADE Subtract 32 and divide by 1.8

CENTIGRADE TO FAHRENHEIT Multiply by 1.8 and add 32.

Thus to change 65° F to C. Subtract 32 from 65, which leaves 33 Divide this by 1.8 which gives the Centigrade reading of 18.3°

PHOTOGRAPHIC THERMOMETERS

The thermometers used in photographic work are graduated in the Fahrenheit scale, and are usually of two types. The "stirring rod" type Thermometer is a glass rod having a thermometer in one end, this end being used for stirring solutions when mixing formulas. Due to the danger of breakage it should be kept in the original container when not in use. The Tray Thermometer is a short glass thermometer mounted on a metal plate which carries the graduations. This type is for use in developing trays and for determining temperatures in small depths of solutions. A reading should not be taken for several minutes after the thermometer has been subject to a change of temperature Thermometers should always be handled with great care.

SATURATED SOLUTIONS

Some photographic formulas call for a saturated solution of a certain chemical in water A SATURATED SOLUTION is one that contains all of the substance that the solvent (water) will dissolve, or hold in solution. THE SOLUBILITY, or amount of chemical that will dissolve in water, differs widely for various chemicals. Thus, a saturated solution of lime (calcium hydroxide) contains less than two-tenths of one per cent of lime, while a saturated solution of potassium iodide contains about 56 per cent of the iodide Most chemicals are more soluble in hot water than in cold. Thus it is important to know that what temperature the saturated solution is required. Some formulas will state this temperature, if not, it is sufficient to assume the standard temperature for photographic work is 65 to 70 degrees F., and prepare the solution as near these temperatures as is possible

TO PREPARE A SATURATED SOLUTION, measure out the quantity of water desired in a graduate, or other clean container, and add the chemical a little at a time, stirring continually, until no more of the chemical will dissolve After this, with a small amount of the undissolved chemical in the bottom of the container, stir at intervals for about an hour, after which the required amount of the saturated solution can be poured off. In case the chemical used has a tendency to warm or cool the water as it is dissolved, it should be added slowly enough to cause but slight change in the temperature of the solution.

SUPERSATURATED SOLUTION

Under some conditions a solvent such as water will hold in solution a greater amount of a chemical than normally forms a saturated solution. This SUPERSATURATED SOLUTION is usually formed by dissolving the chemical in hot water and allowing it to cool. Normally in such a solution, the excess of chemical will go out of solution upon cooling, usually in the form of crystals. The "Crystallizing out" can be illustrated by dissolving "hypo" in hot water until a saturated solution is obtained, then upon cooling, practically the entire volume of the solution turns to crystals of hypo, closely resembling the original crystals

CARE AND PRECAUTIONS

Graduates, as well as all other glass instruments used in Photography, should be handled with care to prevent chipping and breakage. They should be thoroughly washed before and after use, and kept in racks over the sink in an inverted position. Hot water should never be poured into an empty or cool graduate, as it will surely break. A considerable amount of heat is liberated when an acid and water are joined in solution. For this reason, when acid and water are joined, NEVER POUR WATER UPON ACID. Such a procedure may result in scattering of the acid, which can easily cause blindness, or at the least, bad burns on the skin or clothing Some liquids form gas within the container which may cause scattering of the liquid when the stopper is loosened. In opening a bottle of acid, hold it at arm's length with the face turned away while the stopper is loosened. If a glass stopper sticks in the bottle, do not use force in loosening it because the knob on the end of it may break off A light tap with a piece of wood on the neck of the bottle will often loosen the stopper If not, a cloth dipped in hot water, wrapped around the neck of the bottle, might be used. This will usually loosen the tightest glass stopper After removing stoppers (either cork or glass) from a bottle of acid, place them upside down on a clean piece of paper while the bottle is being used Always replace stoppers in the same bottles from which they were taken When using dry chemicals, avoid air currents which may carry

chemical dust into the darkrooms, causing spots and stains on negatives and prints Do not brush or blow away chemicals that have been spilled. They may be wiped up with a damp cloth.

PREPARING SOLUTIONS

Chemicals should always be weighed and solutions prepared as far from the darkrooms as is practicable If space permits, a special room should be used for chemical mixing Small quantities of solutions are usually mixed in graduates. For large quantities enameled buckets or the final containers can be used. Since a chemical is usually more soluble in hot water than in cold, the quickest way to prepare a solution is to dissolve the chemicals in hot or warm water Therefore, as a general rule, the chemicals should be dissolved in a small amount of hot water, and diluted to the desired amount with cold water

PRIMARY RULES

Although different methods are employed in preparing the various solutions used in photography, the following rules apply to all and should be strictly adhered to

CLEANLINESS. The first step in preparing a solution should be to clean thoroughly all containers and apparatus to be used Contamination from chemicals previously used may ruin the results of the next solution.

USE PURE AND PROPER CHEMICALS Be sure of the purity and strength of the chemicals to be used, and do not make substitutions unless from previous experience or instruction you are sure the results will be satisfactory

USE PROPER WEIGHTS AND AMOUNTS Formulas call for a certain amount of each chemical These formulas have been carefully worked out and tested to produce the best possible results. Therefore, be very accurate in your weights and measurements. Use the exact amounts called for in the formula.

DISSOLVE CHEMICALS IN PROPER ORDER. Formulas always give chemicals in the order in which they are to be dissolved There is a good reason for this, as will be shown later, and failure to follow the proper order will almost always result in the solution functioning improperly Always make sure that one chemical is thoroughly dissolved before adding the next In the case of a developing solution, if the alkali is added before the crystals of the developing solution are dissolved, these crystals will be oxidized at the surface and the solution will give fog

ALLOW SOLUTION TO STAND BEFORE USING Insoluble impurities are often present in a solution after it is prepared and these settle out to a large extent if the solution is allowed to stand for a few hours before use Also, the mixture of the various chemicals becomes more thorough during this time.

(To Be Concluded in October Issue)

NEW FAVORITES

EASTMAN'S three great new films back up their special characteristics with typical Eastman reliability and uniformity. Worthy successors to earlier Eastman emulsions, they are the new raw-film favorites of the motion picture industry. Eastman Kodak Company, Rochester, N. Y. (J. E. Brulatour, Inc., Distributors, Fort Lee, Chicago, Hollywood.)

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BACKGROUND-X
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659 Crew Covers

cobb's

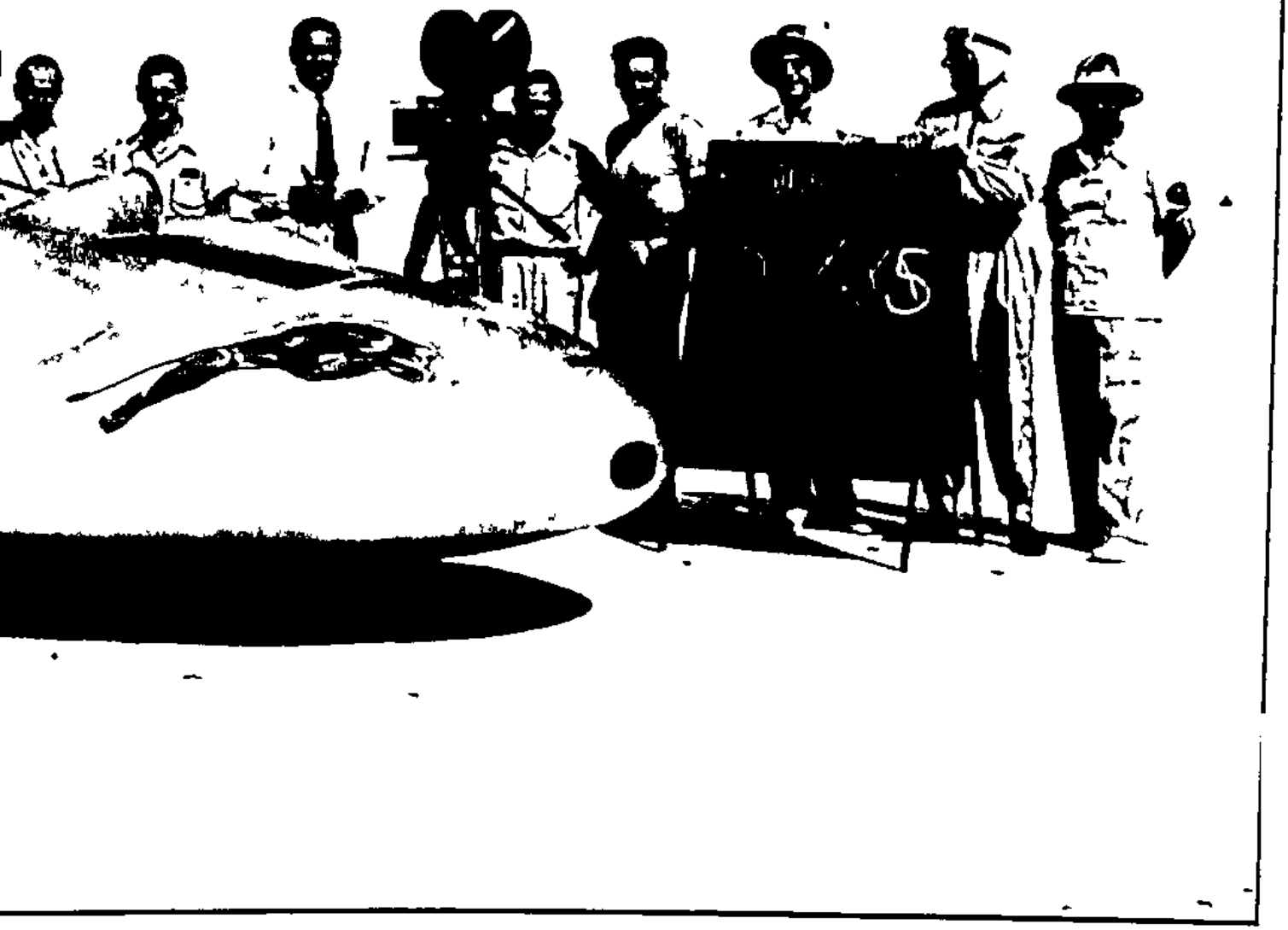
JOHN COBB of England roared over Bonneville Salt Flats in Utah last month in his 2600-horsepower aluminum automobile fa ter than any human had ever travelled before on wheels A crew of Local 659 cameramen were on hand to record Cobb's sen sational speed of 369.85 miles per hour over a measured mile

Billy Snyder head cameraman for Wilding Pictures com mercial production company headquarter ng at the Selznick lot, made the commercial short sponsored by Gilmore Oil Company whose products were used by Cobb in h s speed record da h

The shot above made exclusively for INTERNATIONAL PHOTOGRAPHER, at the conclusion of the record run, shows, reading from Left to Right Rod Tolone Bill Margolis, two AAA aides, Ellis Carter Bobby Gough Earl C. Gilmore B lly Snyder, Burt Eason AAA official John Cobb and Art Pillsbury chief AAA checker

The record run was made at 6 a.m., when the salt bed sur face is hardest AAA official timers checked the run using an electric eye at each end of the measured mile The motion pic ture cameras were 1200 feet from the track which was 100 feet wide and 14 miles long The measured mile was near the center of the course allowing about six miles to get sup speed and an othe rsix to slow down

In order to establish a record the car must make the run



RECORD

By Mickey Whalen

one way and start a return run within one hour as demanded by racing rules

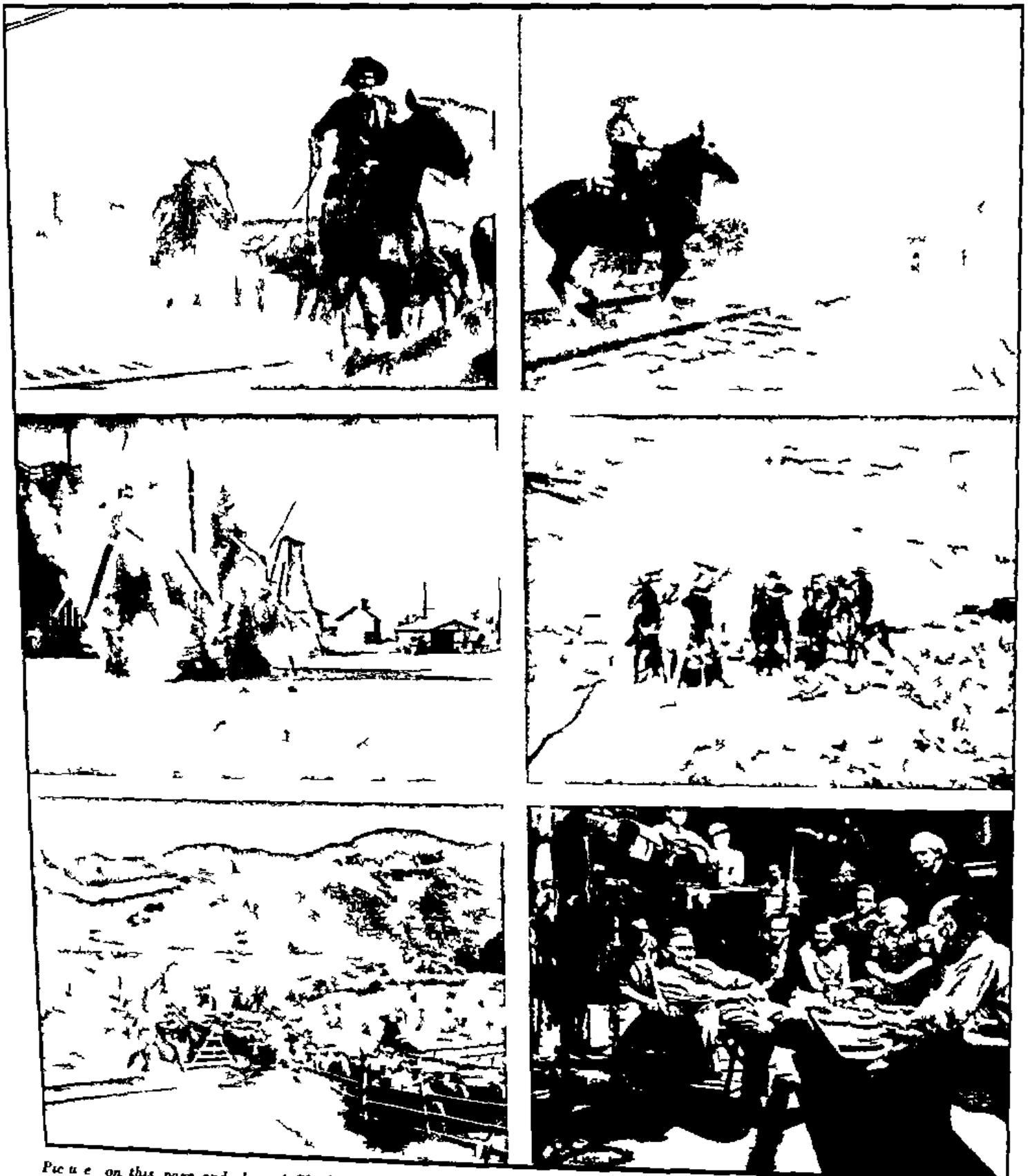
The double run called for super efficient advance preparation because at the end of the 14-mile first run tires spark plugs etc had to be changed 150 pounds of ice in special compartment near motor in rear must be replenished, oil changed and gas tank reloaded Cobb brought eight mechanics from England with him to handle the job

The Railton Red Lion named after its designer is built primarily to study effects of terrific speeds on engine parts and design After cracking the world speed record Cobb's car was shipped back to England where every part will be tested and studied in six months of laboratory work to compile technical information for guidance in future design Same thing applies to tires set of which breaks down badly during one run

Cobb and his crew left for England immediately after establishing the record because a number of them were in the reserve force and on call for military duty

Snyder and his crew all members of Local 659, IATSE found the English sportsman and his aides very cooperative and the unit came back with some remarkable shots of the speed runs

stills by . . .



Pic u e on this page and ho of Charl e and Syd Chapl n on oppo e pag are f om he ame a of J Edu n Neu e an t ll man membe of Local 659 IATSE Sho on his page a e f om R publ c p odu on Weste n scene a e f om Old

NEWS OF THE MONTH

European conflict and photography, Leica suspends house organ, diffusion screen used for entire picture, Local 659 Don Lee television cooperation, new Academy committee, SMPE annual sessions to be held in New York in October

. . . J. Edw. New



Monterey Lower left shows crew and cast of Higgins Family Behind camera are Ellis Thackery Al Keller and John McBernie Local 659 members Gus Means director (center chair) and Mary Hart, Lucille Gleason Harry Davenport and Jimmy Gleason Just after the end of the World War in the spring of 1918 Charles and Syd Chaplin posed for this shot as they broke ground for the Chaplin studio at La Brea and DeLongpre Avenues in Hollywood Now 20 years later Chaplin resumes production activity on a satirical take-off on the war lords who are heading Europe into another mad chaos

War and Photography

● Immediate repercussions will be felt in the photographic field if the European war settles down to a dog fight There is no question but that photographic equipment particularly lenses will be at a premium and prices may take a rapid rise This trend is especially indicated for the finer type of precision equipment

Little specific information is available at present as to exact prospects in this respect for the immediate future First significant development was the sudden suspension of Leica Magazine published by E Leitz, Inc with the current September issue

Editorial statement announcing the suspension said

At present world political events have been so fashioned that practical necessities must replace our enthusiasm We find ourselves in a position whereby it is not possible to publish *Leica Photography* It is therefore temporarily suspended with this issue We are however going to keep in touch with our Leica family through a bulletin of Leica news which will be issued from time to time until various factors permit *Leica Photography* to be published again

Carefully worded announcement obviously referred to current war in Europe Leitz organization in America has close German affiliation Suspended publication was one of several dozen interesting journals issued monthly by the large film and camera manufacturing companies to owners of their equipment

Screen Used Throughout

● From George H Scheibe comes the information that Island of Lost Men" current Paramount release was photographed throughout the entire picture with the Scheibe No 1/16 diffusing screen Photographers who are interested in diffusion effects should not miss this production

Don Lee Television

● With the resumption of television broadcasting by the Don Lee organization IATSE technicians are again cooperating on this experimental program Recent improvements and new developments combined with the better results obtained through for the first time using professional motion picture technicians on the production end of cameras and lighting are so newsworthy that INTERNATIONAL PHOTOGRAPHER now has in preparation a detailed article for early publication on

the Don Lee organization's cooperative television work with members of Local 659 and other West Coast studio locals

Daylight Sensitometer

● Hollywood Color Film Corporation formerly Duplex Cinema Equipment Company announce a new 16 mm daylight operating sensitometer which prints strips automatically It is claimed to be the only daylight operating sensitometer on the market It prints from a series of frames of negatives instead of one print

This firm is busy on 16 and 35 mm color making 16 mm color a specialty Their new Duplex camera has a split beam for three colors and on it they can use less than two inch focal lens with 220 degrees opening in the shutter This model is not for sale but is built for their own use

Smithsonian Showing

Sixty prints from Paramount Studio Camera Club will be exhibited at Smithsonian Institute during November according to wire received from H S Bryant Institute's chief of correspondence and documents, to Farciot Edouart at Paramount Edouart, head of transparency department suggested the exhibition to Bryant during latter's recent visit to Los Angeles Douglas Rudd chairman of the studio club is making arrangements for shipment of the photographs to the National Museum

Tempos and Temperature

● Technicians have been engaged at MGM for express purpose of keeping the stage on which Eleanor Powell and Fred Astaire dance on a huge mirror, at sixty five degrees temperature When stage temperature goes above this point, the glass becomes slippery, making the intricate steps of the pair almost impossible The dance stars are engaged in their first co-starring feature "Broadway Melody of 1940"



Film Research Council

● Motion Picture Research Council resumed regular sessions this month with first meeting in the Paramound Studio library President Helen Gladys Percey is head of that department. This is or

Keyes "Oomph" Cover

● Donald B Keyes charter member of Local 659 and one of the pioneer color men in Hollywood cracked an unprecedented array of national magazine covers with his work on Ann Sheridan in connection with publicity campaign staged by John LeRoy Johnston for Walter Wanger's Winter Carnival

During July Keyes covers of the oomph girl were featured by *Life Look Picture Play Movies* and *Screenland* while other publications and key city newspaper drama pages also featured the shots It is doubtful if any star has ever received such a smash of front page reproductions in a single month, all made by one photographer

Keyes who operates a color laboratory at 2128 Canyon Drive in Hollywood used the Devin one-shot camera to make his pictures. He prefers the Devin rating it as the last word in color cameras All the processing was handled by himself in his own lab



SHOOTING THE BULL but the real thing not the kind the propagandists are passing out these days The man with the gun is Russell Harlan veteran members of Local 659 IATSE and first cameraman on the "Hopalong Cassidy" productions that Harry Sherman turns out with such consistent success starring William Boyd for Paramount release

ganization's second year of activity George Macon, MGM, is vice-president, and Lucy Monroe, RKO secretary Society has a cooperative program among studio research department workers

Mob Make-up

● With RKO using 3,000 extras in big mob scenes during the final weeks of filming "The Hunchback," requiring, in addition to facial coloring, 3,000 15th century wigs, 2,500 beards and whiskers Mel Berns, RKO's make-up head, requisitioned between 60 or 65 make-up men and hairdressers to handle the mob, or more than one fourth of the 225 comprising the membership of Local 706, IATSE.

Pereira Designs New Studio

● Paramount's new $12,000,000 studio project in West Los Angeles will have William Pereira, nationally famous in industrial development, as chief architect for the new plant, announced last month by T Keith Glennan, Paramount operations manager Pereira will coordinate all activity in conjunction with the planning and actual construction of the studios through the Glennan office Glennan also announced that actual construction work on the new studios will start when necessary ordinances are obtained and the storm drain contract for that area completed

David Visits 659

● Ed David son of Charlie David, of Local 666, IATSE, Chicago, was a visitor to Local 659's new headquarters on Sunset Boulevard last month Younger David was here on a vacation trip and renewed acquaintances with a number of members Local 659

New ARC Committee

● Academy Research Council announces appointment of a committee chairmaned by S J Twining of Columbia to consider possible revision of specifications for the Standard Release Print Leader Present Standard Leader was revised in August of 1936 simultaneously with adoption by the industry of the Research Council Standard 2000-foot Reel

Purpose of the presently appointed Committee will be to study the specifications with a view to recommending changes which may improve the Standard Leader and facilitate its use by theatre projectionists As a first step the Committee will request the cooperation of all theatre projectionists, theatre circuit technical supervisors and others in submitting suggestions for possible revisions in the Standard Leader

Membership of the Committee which will hold its initial meeting September 15 consists of S J Twining Chairman John Aalberg Gerald Best Sidney Solow and Ray Wilkinson

In Memoriam

Harry Forbes, first cameraman, and Harold Porter second cameraman, were taken by death since last publication of *International Photographer*. Both had been longtime members of Local 659 and had many friends in the organization Sincerest sympathies are extended to the families of Forbes and Porter in their bereavement

LOSE-UPS

erpae: Special Effects First Cameraman



GARBO RETURNS and after a considerable absence from the screen and from pictorial publicity, MGM exploiteers and still photographers once more are seeking new slants to publicize the 'glamorous Suede" Hints of a new Garbo, of more hoydenish spirit are borne out by the new stills from MGM, such as this effective shot by Clarence Sinclair Bull member of Local 659, IATSE

SMPE Meets October 16-19

● Hotel Pennsylvania New York City national headquarters of the Society of Motion Picture Engineers will be scene of 24th annual convention of the Society to be held October 16 to 19 inclusive E. A Willford President, will preside at many of the convention gatherings General arrangements are in charge of W C. Kunzmann Convention Vice-President who is also in charge of registration and information Extensive program of interesting papers and technical presentation is being arranged by J I Crabtree Editorial Vice President, and by the Papers Committee headed by Sylvan Harris.

Local arrangements and reception of Society delegates will be in the hands of an 18 man committee headed by D E Hyndman, Chairman of Society's Atlantic Coast Section Hotel and transportation arrangements are in charge of J Frank Jr and his committee H Griffin heads committee on convention projection Mrs O F Neu will act as hostess to the ladies, assisted by her Ladies Reception Committee

At the annual banquet and dance October 18 at Hotel Pennsylvania presentations of the annual Progress Medal and Journal Award will be made The Progress Medal is awarded annually by the Board of Governors in recognition of any invention research or development which has resulted in a significant advance in motion picture technology The Journal Award is made by the same Board to the author or authors of the most outstanding paper originally published in the Journal of the Society during the preceding calendar year The names of the award recipients will be announced at the banquet Chairman Hyndman emphasized need for making hotel reservations early because of out-of-town crowds attending the World's Fair

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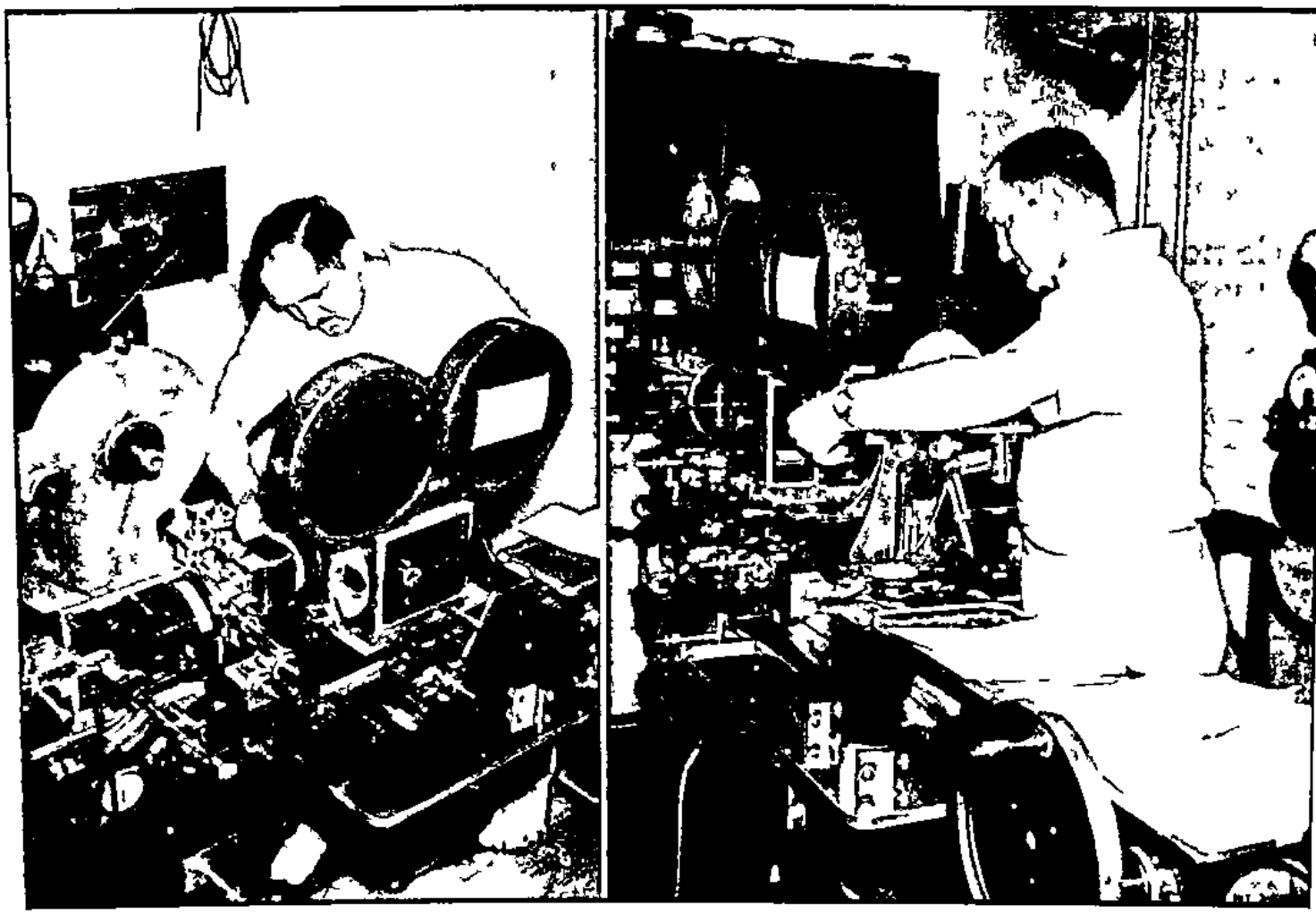
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CLOSE-UPS

Paul Lerpae: Special Effects First Cameraman



NOT ALL CAMERA wizardry is figurative The special effects branch of motion pic ture photography includes a number of able gentlemen who combine science and engenuity in a form of magic as baffling as any trickery concocted by Merl n for visiting Connecticut Yankees

The optical printer is the instrument most frequently used by the members of Local 659 in the special effects field The modern professional camera is a marvel of efficiency but the optical printer starts where the camera leaves off

Over at Paramount it was discovered one day that in an important scene an American flag had been photographed with the stars on the right instead of on the left as they should be To retake the scene with the flag hung correctly would have cost from $5000 upwards The opti cal printer was called into service and the flag was doubled in The job was photographically satisfactory and the sav ing was obvious

We single out the Paramount lot as the place where the particular blunder oc curred not because Paramount has more corrective assignments than any other lot, but because Paramount s first cameraman in charge of optical printing and mon tages, Paul Lerpae is the subject of this month s CLOSE UPS Lerpae is a veteran member of Local 659 IATSE having joined the organization in 1923 shortly after its inception He has been with Paramount pretty steadily since 1920 when he—like many another of our CLOSE UPS subjects—got his first studio job in the lab

The eraser on your pencil can remove errors The job of the optical printer is to do more thon that the error must not only be removed it must be corrected There are obviously few routine assign ments for the camera crew handling opti cal printing Every new task presents many new and untried angles The tech nique therefore is the result of the accu mulation of experience combined with ex tensive experimentation

The most spectacular aspect of the work of the optical printing cameraman is this sensational and wizard like ability to save scenes to solve problems and in short to play the role of safety man for the rest of the production team Special prob lems create opportunities for unusual

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achievements. But the actual daily routine of modern studio special effects departments calls for much more than this.

At Paramount, Lerpae is in charge of optical printing and montages in the special effects department under the direction of Gordon Jennings and Roy Hunter. At other studios the lineup may be a bit different for the various lots, each have their own peculiar way of handling such matters even to the details of the actual equipment that is used. Much of the equipment is specially designed and built to meet the ideas of the particular studio department.

Under modern production conditions and increasingly efficient and more dramatically interesting methods of telling stories on the screen the special effects and montage work is an integral part of the story preparation from the early stages of scripting. Method varies on different lots but the general procedure calls for advance planning for unusual and dramatically effective photographic twists and stunts rather than using special effects and optical printing merely as time and money saving mediums.

The production executive, the director, the writers and the photographer, all benefit from suggestions advanced by the department that is best known for its miraculous achievements in saving the studio from the ill-effects of blunders or unsurmountable circumstances that might have marred a scene.

Lerpae gravitated to studio work, when his family came here from Akron, Ohio, where he had been educated, in 1920 and after a spell in the Paramount lab, he graduated starting in 1923 to assistant second and finally first cameraman rating. Most of his photographic chores have been in the special effects field for he kept relentlessly after Roy Pomeroy, then head of the studio's special effects work, until he was given a chance. He has specialized ever since in the field that intrigued him from his first day in a studio.

During the past eleven years, Lerpae, like other first cameramen in this particular branch of photography, studied and learned by daily trial and error. And like most of the men in the field, he attributes much of his group's success to the precision equipment and steadily improved film emulsions available to them through the cooperation of manufacturers with the industry.

His steady tenure at Paramount, is, he believes characteristic of the work in the field because each studio organization likes to train its own men to its particular method of operation. Familiarity with the particular studio's individual technical gags and devices, trade secrets and pet ways of accomplishing results is absolutely essential. Consequently, there is less shifting from one lot to another than in any other branch of motion picture photography.

Lerpae, like most other special effects experts, is a difficult subject to round out descriptively. By the very nature of their work, they are inclined not to gabble lengthily about it. They are pleasant but vague about the whole business. Their work speaks for itself, but neither they nor it are inclined to disclose the interesting details of how it is done.

Another thing, special effects workers don't like the emphasis placed by sensation hunting journalists upon the trickery aspect of their work. Conflict between studio tendency to play mum on all trick stuff in pictures and the expose-minded writers invariably puts them in the middle.

Special effects workers view their jobs as integral parts of the complete task of creating dramatically effective screen entertainment. Because of the complexities involved in recording the most telling treatment possible on celluloid they can't see why special effects can not be regarded as equally legitimate phase of artistic contribution to screen entertainment with the dramatic tricks of a skilled playwright or the artistic license taken by poets and painters.

As Lerpae points out nobody would criticize a painter for distorting natural perspective that might appear in a photograph to achieve an emotional effect with his brush, so why assume that anything not photographed in straight newsreel style must be regarded as an attempt to "trick the public."

In other words, special effects tricks and stunts are just another aspect of industry progress toward placing a richer and more effective type of entertainment upon the screen. Whether or not the entertaining or emotional effect was obtained by technical trickery or straight routine "medium, long shot, close-up" photography is secondary. In fact, the ability to achieve unusual methods for presenting situations and *emotions*, is the *big edge that* the motion picture holds over other restricted art forms.

From the technical standpoint Lerpae thinks most significant progress made recently has been in broadening the possibilities of Technicolor. Even with the added problems of three negatives which must register accurately, great strides are being made in special effects in color.

Future of special effects progress holds great possibilities for the industry, Lerpae believes dependent entirely upon the enthusiasm generated among production creators for more and trickier special effects work, plus ability of special effects technicians to satisfy this enthusiasm with practical results. On the past record of his branch of the business, he's pretty sure the boys will hold up their end.—Gib.

TRADEWINDS

Eastman will distribute Bardwell & McAlister Keg Lite and Loco-Spot, new diffuser from Flat Light Screen outfit; Agfa improves grid shot service speed; new Kodak data books; news from manufacturers, distributors on new products



Bardwell ***McAlister***

Two studio mugs who started with one employee in 1933 to build an electrical equipment business and by the quality of their product have made their names familiar to studio cameramen juicers and grips wherever motion pictures are photographed

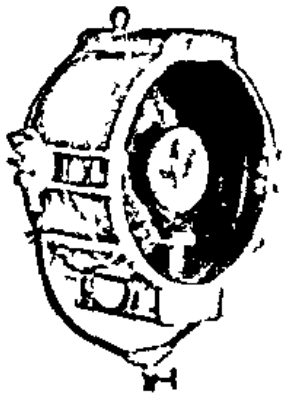
Two MEGS with but a single thought and that—lamps The duo was C Bardwell and J G McAlister who had been work ing in the studios for years The lamps were intended for motion picture produc tion and they thought tl ey had some new and worthwhile ideas to contribute to mo tion picture l ghting

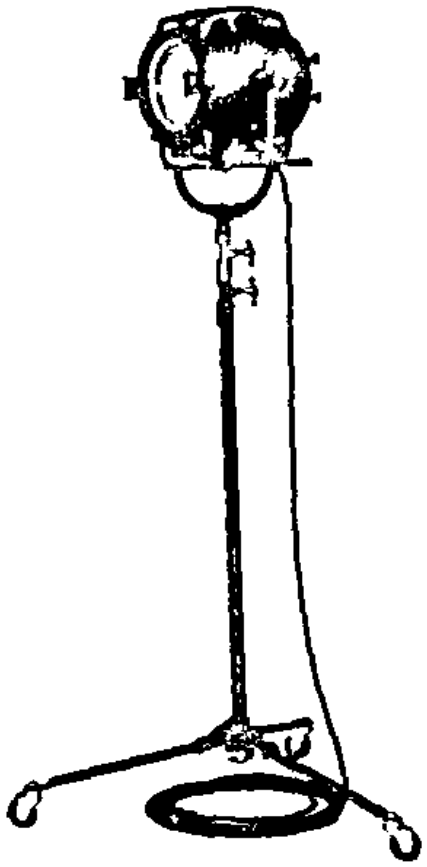
The boys had a bit more than the pro verbial shoe string but not much They started their business in 1933 with one employee General service repairs ren tals etc were bread and butter side is sues to their main scheme the creation and perfection of new type lamps

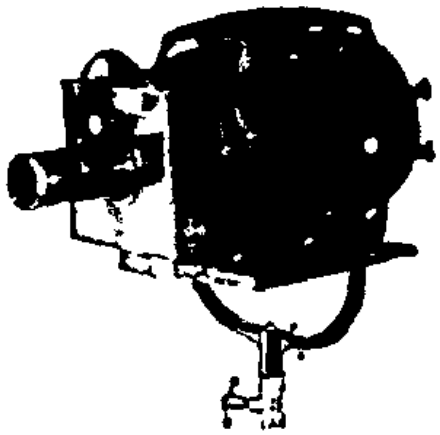
Bardwell & McAlister had practical groundwork from their own experience in Hollywood studios and they slowly built an organization around them that com bined practical efficiency with engineering accuracy The organization turned out lamp after lamp each with new improve ments and refinements

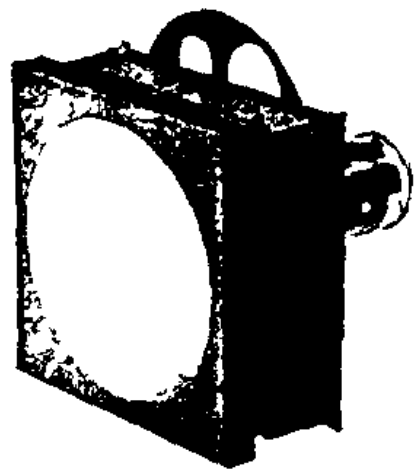
Soon the quality and service of Bard well & McAlister product found itself competing on an even footing with the older firm of Mole-Richardson and as the friendly rivalry of the two organiza tions grew keener the smaller and less progressive firms in the lighting equip ment field were forced into the back ground

Today Bardwell & McAlister battles M R on an equal footing and this inten sive rivalry of two alert and progressive firms each headed by men with studio









First Column close up of Bardwell & McAlister Type T-5 studio lamp Center full view of Baby Keg Lite, with lamp stand and cord. Top Third Column Baby Keg Lite with Foco-Spot attached Below close up view from the rear of the Foco-Spot Latter lamp and the Foco-Spot now are being distributed by Eastman Kodak through their stores in the U S and Canada under arrangement just concluded

backgrounds is responsible for the overwhelming superiority of Hollywood made motion picture lighting equipment over that of any manufacturing center in the world

Latest palm awarded Bardwell & McAlister equipment is the conclusion of arrangements with Eastman Kodak Company whereby the giant film organization will distribute the highly successful B&Mc Baby Keg Lite with its companion Foco-Spot through their national chain of stores in the United States and Canada

The lamp will be exploited as an ideal photographic tool for both motion pictures and still work

Their business, of course has been built around the motion picture studios and Bardwell & McAlister have reserved the right to continue to sell all of the studios and recognized producers throughout the world In addition to the Eastman outlet they have representatives in India South Africa, Egypt and several South American countries Bardwell & McAlister are well known to the members of Local 659 and other IATSE locals as "Bard and Mac"

Bardwell is married has a home in Westwood and has two girls and a boy Mac is married also and lives in an apartment close enough to the B&Mc plant so that he can get there on a minute's notice and he himself answers the phone day or night, having a connection in his home so the studios may reach him regardless of time

From a motion picture standpoint the company's most recent development was announced in the August issue of INTERNATIONAL PHOTOGRAPHER—the Type 19 5000 watt spot This lamp has met with enthusiastic approval in the studios because of its light weight and the fact that it operates at a cooler temperature than the average lamp of equal wattage

The Baby Keg Lite weighs 25 pounds and is easily handled Its stand reaches up to 8½ feet It uses 500 or 750-watt globes T 20 or T 24 with medium bi post base

Foco Spot is an optical accessory which fits in the diffuser clips of the Baby Keg Lite It develops a concentrated beam with sharp edges, either round or rectangular A revolving disk with several sizes of round apertures will, at distance of 15 feet, provide brilliant circles of even light in sizes from 3½ up to 9 feet in diameter Rectangular shapes are obtained by four sliding mats these rectangles may be rotated to suit the object This permits use of concentrated high lights special shadow and silhouette effect and other lighting tricks with ease and assurance

As an accessory to the Foco Spot a background slide may be purchased at slight additional cost. Original designs may be drawn or painted on glass slide and projected on the background

Portrait photographers and commercial photographers are finding that Foco-Spot has opened a new field of portrait possibilities

With the Baby Keg Lite slight pressure on a conveniently accessible control rapidly spreads beam to any desired angle from a 4-degree spot to a 50-degree flood Calibrated scale, giving focusing arm position, allows duplication of any desired lighting effect. This is an exclusive feature with patents pending

The light output of Baby Keg Lite is three times greater than the average photographic light of equal wattage with conventional optics. At any degree from spot to flood the field is clear and even. The intensity of the light beam is the same regardless of the aperture used

Following is the price list for the lamp and accessories Baby Keg Lite, complete with double riser collapsible stand, 25 feet of rubber covered cable and plug without globe, $35 Foco-Spot Attachment with rotating disk and adjustable mat $25 Background Slide with five clear and one heat proof glass slides, $2.50 globes used in Baby Keg Lite are 500-watt T 20 clear C-13 medium bi post globe—either M P 3200° K. or C. P 3320° K $1.25 750-watt T 24 clear C-13 medium bi post globe either M P 3200° K. or C. P 3320° K $3.50

New Type Diffuser

● In conjunction with announcement that Flat Light Screen Company is purchasing land to build a plant in the San Fernando

Valley, Russell Owen of Flat Light announces that the company has developed a new light diffuser that they expect to eventually replace jellies and silks in studio service. Current demonstrations indicate that the diffuser, made of the same material as the Flat Light screen, has worthwhile possibilities. Continued success of the company's screen with theatre operators is such that Flat Light has outgrown its present Hollywood quarters, hence the move to the Valley.

Agfa Speeds Grid Shots

● Following a custom which the Agfa Ansco Corporation established several years ago for the benefit of coaching staffs, Agfa 16mm reversal laboratories will be prepared to give special service on the processing of football films during the coming season. All Agfa 16mm Reversal Laboratories in the United States will remain open over the week-ends for processing of football films. These will be finished and returned the same day as received, permitting viewing of the films by the coaches and football enthusiasts within the shortest possible time after the game.

To insure quickest service, all films should be sent to the nearest processing station by parcel post special delivery, air mail, or by messenger. The films will be returned by special delivery if three hundred feet or more are involved. Otherwise, and also for shipment by air mail sufficient return postage should be sent along with instructions. To facilitate identification the outside of the parcel should be marked "Football Films."

Agfa Reversal Laboratories providing this special service include:

Agfa Ansco Corporation, 245 W. 55th Street, New York, New York.

Agfa Ansco Corporation, 433 E. Erie Street, Chicago, Illinois.

Agfa Ansco Corporation, 1224 S. Hope Street, Los Angeles, California.

Agfa Ansco Corporation, 121 Julia Street, Jacksonville, Florida.

Motion Picture Service Co., 125 Hyde St., San Francisco, California.

The Calvin Company, 26th and Jefferson Sts., Kansas City, Missouri.

Can Mail Superflash

● Wabash Photolamp Corporation, Brooklyn, N. Y., announces that their safety coated Wabash Superflash Photolamps have been tested by the Post Office authorities and okayed for sending through the mails. Postmasters and other postal employees have already been notified by publication in the *Postal Bulletin of August 17, 1939*.

Wabash states that Superflash bulbs as packed in their present corrugated sleeves can safely be shipped parcel post anywhere without breakage if ordinary care is taken in packing. They recommend wrapping the bulbs in corrugated paper, especially when mailing only a few at a time, or packing inside a corrugated carton with a corrugated liner to fill up empty space *in the carton and* separate the bulbs from any other merchandise shipped in the same package.

25 Cent Exposure Meter

● International Research Corporation, makers of the Argus camera line, have placed on the market the inexpensive Argus Vestpocket Exposure Meter, a celluloid wedge type meter that is flat and small enough to be carried in a vest pocket or lady's handbag without knowing it's there. A rotating wedge disc indicates brightness of the object aimed at while a sliding rule quickly and accurately indicates the correct shutter speed and lens aperture to use. Film speeds

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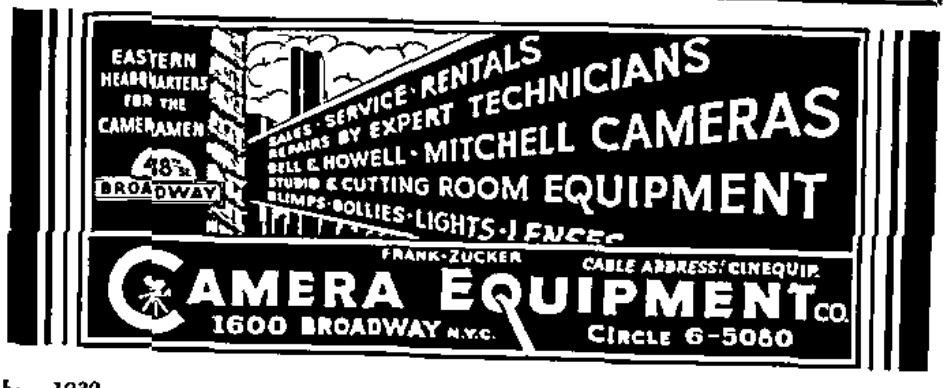
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are in Weston ratings. This meter costs only 25 cents complete with leather case

Argus Jig A Mat

● The Jig A Mat, recently announced by the International Research Corporation of Ann Arbor, Mich., resembles an ordinary 8x10 enlarging easel but its top is covered by thirteen separate and differently shaped mats made of red bakelite which can be arranged to form an almost unlimited number of montage combinations. Each mat has its number and indicator so there can be no mistake as to the paper areas exposed and those that are still to be exposed. The device is said to be very useful in making photomontage prints. It costs $6.75

New Kodak Data Books

● Four new Kodak Data Books at nominal prices are available from Eastman Kodak Company Rochester. The books, in uniform 6x8½ inch format are

"KODAK FILMS," 56 pages, 15 cents. Discusses Kodak Roll Films, Film Packs, Miniature, and Sheet Films. Photographic characteristics of the films, such as speed contrast, and the like are described, and the sensitometric terms are explained. Methods of determining film speeds and meter settings are also discussed. Of especial value is the "Specifications" section, which provides full information as to the photographic and physical characteristics, the uses and processing of each film

"KODACHROME, PHOTOGRAPHY IN COLOR" 52 pages, 25 cents. A comprehensive discussion of Kodachrome Film and data on its use for full color filming. Exposure technique both in daylight and artificial light is treated and advice on using a photoelectric exposure meter is included. This carefully planned book offers diagrams and recommendations for night pictures at home in color as well as daylight shots, covers both movie and "still" filming and provides full specifications and data tables for Kodachrome Regular and Type A and Kodachrome Professional Film Daylight Type and Type B. A number of illustrations are in color

"WRATTEN FILTERS," 40 pages, 15 cents. This book deals with filters from both the practical and theoretical standpoints, and will appeal equally to the commercial photographer and the serious amateur. Diagrams and illustrations in black-and-white and color supplement the text and demonstrate the use of various filters and the Kodak Polascreen. Reference tables aid selection of the proper filter for a given need. Specifications treat each filter individually giving all data concerning its use and cover the K1, K2, X1, G, A, F, B, C5 Tricolor Sets, C5, 3, and Kodak Polascreen Type 1A.

"EASTMAN PHOTOGRAPHIC PAPERS," 48 pages, 15 cents. Offers full information on the various brands of Eastman photographic papers, and deals at length with their photographic and physical characteristics. A section on "Printing for Quality" is of particular value and gives helpful suggestions from the choice of paper to the finished print. A number of formulas are included in the section on toning. Specifications contain practical data on the most commonly used papers and include exposure scale values and characteristic curves.

Superflash Improvements

● Wabash Photolamp Corporation announces that all Wabash Superflash Lamps from the No. 1 size up now are equipped with invisible double-wall safety jackets to prevent accidental bursting or shattering. Possibility of bulb wastage through "contact flashing" has also been eliminated. Among other Superflash safety features are incorporation of a blue safety spot in each bulb to indicate fitness for use and protection of neck of each lamp by asbestos safety disc

Steel Thermometer

● New stainless steel thermometer for dark room use has been introduced by Chemical United Company New York City. It is guaranteed against corrosion and has a hook attached for convenient suspension from the edge of a developing tray

Zeiss Ikoflex III

● Featuring a 2¼x2¼ negative size new Ikoflex III with Tessar F.2.8 lens and priced at $199 is announced by Carl Zeiss, Inc. New camera carries most of the convenient features found in twin lens reflex instruments of this price class, and a number of special Zeiss developments. The company also is planning early introduction of a Model I which will be priced around $60

George Murphy Catalog

● A new catalog of photographic materials has been issued by George Murphy, 57 E. 9th St., New York City. In 274 pages it lists every type of apparatus for professional or amateur photographers.

Enlarging Photometers

● J M P Spot Photometer is a small handy instrument used to determine enlarging exposure time and correct contrast grade of paper for various negatives. Operating on a battery the Photometer utilizes the bunsen principle for measuring densities of various parts of the negative. More sensitive and precise is the Protyme which operates on a 120-volt house circuit. Its sensitivity range extends from 1/200 to 1/3 foot candle. Readings are made on a sensitive jeweled bearing meter that lights up during use. The J M P Spot Photometer lists at $39.50 while the Protyme lists at $17.50. Both meters are manufactured by the J M P Manufacturing Co., 3034 N. 34th St., Milwaukee

Dated Slide-O-Mat

● New Dated Slide-O-Mat permits 35 mm double-frame film transparencies to be marked easily for filing after being mounted for projection in glass slide form. Frame of Slide-O-Mat is constructed of metal and no taping, binding, or pasting is necessary. Transparencies may be removed easily at any time. Listing at ten cents each, the Dated Slide-O-Mat is distributed by G. Gennert, Inc., 20 West 22nd St., New York, N. Y.

"Naturalcolor" Expands

● Two new plants, one in New York and another in the South, will be added to the Los Angeles and Chicago color print finishing organization of the Naturalcolor Corporation of 62 East Lake St., Chicago. A nation wide chain of Naturalcolor dealerships will also be completed in the near future, and one week delivery service now in effect will be speeded up

Fedco Print Dryer

● The Fedco Print Dryer announced by the Fedco Products Company New York, with eastern distribution assigned to the Ravgram Corp. 425 Fourth Ave., New York City, features compactness, accommodation of smooth and glossy finish prints, polished lacquer drying surface, washable canvas, and is in the low price class.

Willoughby's Catalog

● New 100-page catalog of equipment and accessories, one of the company's largest and most complete to date now is available from Willoughby's, 110 West 32nd Street New York City

NEW PATENTS

By ROBERT W. FULWIDER

LAST MONTH the following patents of interest to *readers of* INTERNATIONAL PHOTOGRAPHER were issued by the U. S. Patent Office. These selections and brief descriptions of new patents were prepared by Robert W. Fulwider well known Los Angeles attorney specializing in patent and trade mark counsel

No. 2,164,513—OPTICAL CONTRAST METER. *Arthur Gaebel* Larchmont, N. Y. Application Aug. 25, 1936. 4 claims.

A meter making use of a photo cell to measure the coefficient of reflection of a portion of a surface with means to compare one portion of a surface to another portion to determine contrast.

No. 2,164,603—APPARATUS FOR TREATING CINEMATOGRAPHIC FILM. *Fred W. Jackman* Beverly Hills, Calif., assignor to Warner Brothers Pictures, Inc. Application Oct. 28, 1935. 9 claims.

A film treating device in which the film supports are reciprocated while the film is progressing through the solution.

No. 2,165,341—PHOTOGRAPHIC OBJECTIVE. *John C. Capstaff* and *Orin E. Miller* assignors to Eastman Kodak Co. Application July 28, 1936. 18 claims.

An optical system of variable equivalent focal length, of substantially constant back focus and of substantially constant effective relative aperture for lenticular film

No. 2,166,049—METHOD OF AND MATERIAL FOR PRODUCING MULTICOLOR IMAGES. *Bela Caspar*, Brussels-Forest Belgium. Application Nov. 30, 1935. 8 claims.

A three emulsion film having dye-forming substances in the two inner emulsions and none in the outer emulsion, with filter dyes between emulsions.

No. 2,166,440—CAMERA. *Charles F. Jones* Burlingame, Calif. Application Feb. 7, 1936. 4 claims.

A camera for taking X-ray pictures in which a camera is out of the path of the X-rays and focussed on a fluorescent screen in the path of the rays by means of an angularly positioned mirror

No. 2,166,617—PHOTOGRAPHIC PROCESSING. *John*

R Weber and *Virgil B Sease* assignors to DuPont Film Mfg Corp Application April 7 1937 6 claims.

A process of treating a multi layer film to remove only the outer layer of silver salts by treating the film in a solution containing 50-90% by weight of water soluble thiosulfates and/or thiocyanates

No. 2,167,454—Optical System for Color Photography or Cinematography *Albert George Hillman* Amersham England Application Jan 19 1938 In Great Britain Jan. 22 1937 6 claims.

An optical system for color photography in which a beam splitter breaks a beam into three beams and the optical system makes these beams of different intensity and passes them through color filters.

No 2,167,732—Photographic Material. *Honore Verhinderen* Belgium assignor to Gevaert Photo-Producten N V, Belgium Application May 14 1937 In Austria May 19 1936. 11 claims.

A multi-emulsion film having a fusible layer between adjoining light-sensitive layers.

No 2,168,041—Color Motion Picture Projection *Frederick T O'Grady* Flushing N Y Application Oct 15 1937 3 claims.

A film for additive color reproduction having alternate frames for projection through different color filters and having a special leader strip with means for determining the proper sequence of frames and filters before the film is projected.

No 2,168,042—Lens Assembly for Motion Picture Projection *Frederick T O'Grady* Flushing N Y Application Oct 25 1937 11 claims.

An optical unit for motion picture apparatus in which the lenses are split by partitions to produce a plurality of images

No 2,168,225—Photographic Image and Method of and Apparatus for Viewing the Same *Hans Lehmann* Hamburg Germany Application June 16 1937 In Germany Dec 10 1936 6 claims.

A photographic image and support having fluorescent material in it and viewed through a filter of a color complementary to the light ema



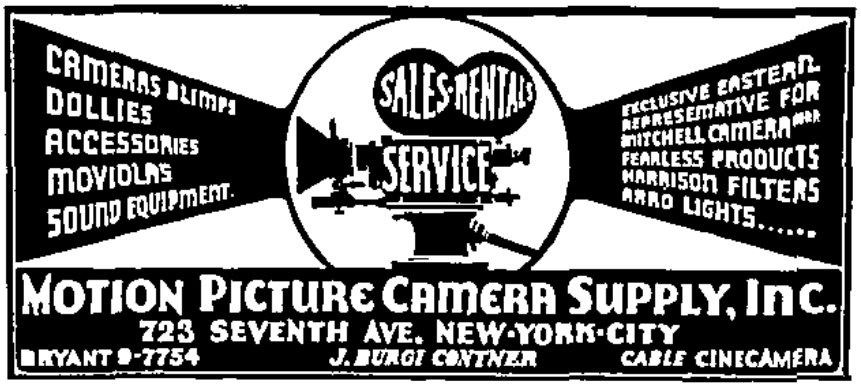
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nating from a source of monochromatic and ultra violet light which illuminates the image.

No 2,168,273—Stereo-Optic Instrument *Hans Sauer* and *Otto Pierling* Germany assignors to Zeiss Ikon Aktiengesellschaft, Germany Application Oct 30 1937 In Germany Oct. 30 1936 6 claims.

A stereoscopic camera in which a single lens is focused on an object, and a stereo attachment is placed in front of the lens, the stereo attachment being adjustable to converge on the same object as the lens is focused on

No. 2,168,433—Cinematographical Projecting Apparatus with Optical Compensation *Pietro Parropassu*, Rome Italy Application Feb 13, 1937 In Italy Feb 17, 1936. 5 claims.

A compensator for varying the height of a projected image produced by a projector which makes use of a continuously moving film and a rotary compensating prism.

No. 2,168,467—Phonorhythm Process and Apparatus for Carrying It Out *Carl Robert Blum* Germany Application Jan 20 1936. In Germany Jan 30 1932. 12 claims.

A method of producing a sound film in several different languages so that the speech will correspond to the movements of the actor

No. 2,169,004—Low Dye Retention Sub for Photographic Film *Cole F Nadeau*, assignor to Eastman Kodak Co. Application Oct 21 1938 12 claims.

A photographic film for use in color photography having low dye retention subbing layers.

No 2,169,009—Method of Color Correction for Color Photography *Merril W Seymour* assignor to Eastman Kodak Co Application Nov 13, 1936. 9 claims

A method of producing natural color prints by printing color separation negatives through filters of colors they theoretically are not sensitive to but actually are

No. 2,169,011—Motion Picture Apparatus. *Raymond W Wengel* assignor to Eastman Kodak Co. Application Aug. 27 1936. 7 claims.

A method of printing an indicating image on each frame of a motion picture film

No. 2,169,061—Continuous-Film Treating Apparatus *Albert W Tondreau*, assignor to Warner Bros. Pictures, Inc Application May 2, 1938. 15 claims.

A film treating apparatus for treating continuous lengths of film by spraying it with appropriate liquids as it passes over rollers set at 90° to each other

No. 2,169,229—Motion Picture Camera. *Guillermo A del Valle* assignor to Radio Corp. of America. Application Jan 31 1936. 8 claims.

A device for indicating the amount of unexpected film remaining in a motion picture camera.

No. 2,169,320—Photographic Diestuff Picture. *Gerd Heymer Wolfen Kreis Bitterfeld*, and *Werner Schulte* Germany assignors to Agfa Ansco Corp., Binghamton N Y Application Nov 29 1937 In Germany Dec. 1, 1936 8 claims.

A method of producing a color picture in which the silver is used to bleach the dye and then removed, and the remaining silver halide is then transformed into a silver image.

No 2,170,433—Optical Apparatus. *Merrill Wade* assignor to Opticolor Incorporated. Application Feb 21 1938. 7 claims.

An optical arrangement for color photography making use of a positive lens, two cylindrical lenses, and a plurality of adjustable prisms.

No. 2,171,472—Moving Picture Camera. *Maurice Albert Dahtel* France, assignor to Suzanne Rosalie Mathot, Paris, France Application June 21 1938 In France June 29 1937 4 claims

A sound insulating box for motion picture cameras which is made of a plastic and lined with rubber

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CHARLES CHAPLIN ON PRODUCTION NO 6" Photo by William Wallace

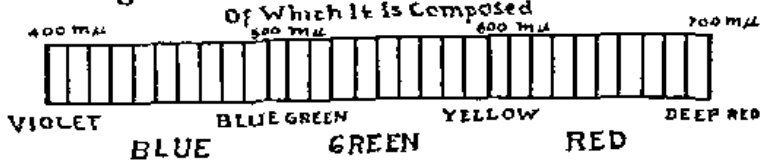
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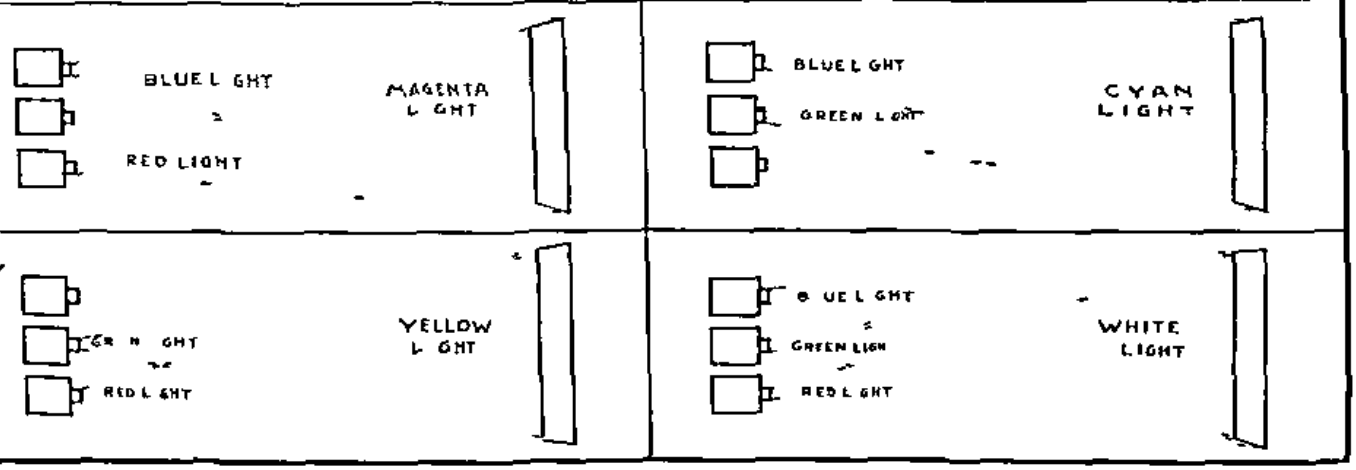
White Light When Passed Through A Prism is Broken Up Into The Various Colors – Or Wavelengths Of Light Of Which It is Composed



Each Wavelength If Isolated Would Stimulate A Separate Sensation Of Color (the Difference In Sensation Caused By Neighboring Wavelengths Would Of Course Be Only Slight)

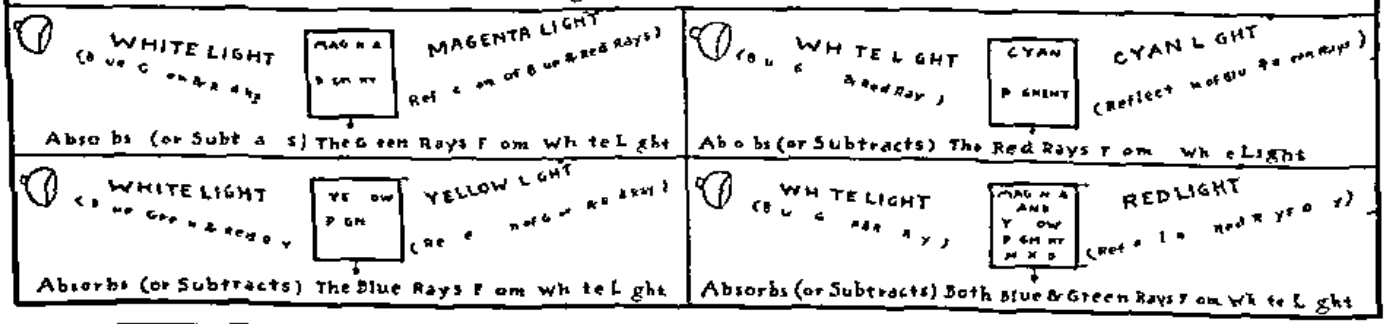
THE ADDITIVE (or LIGHT) PRIMARIES

Blue Green And Red Light When Added Together In Various Proportions As With 3 Magic Lanterns Projected Upon A White Screen Can Produce All Sensations Of Color



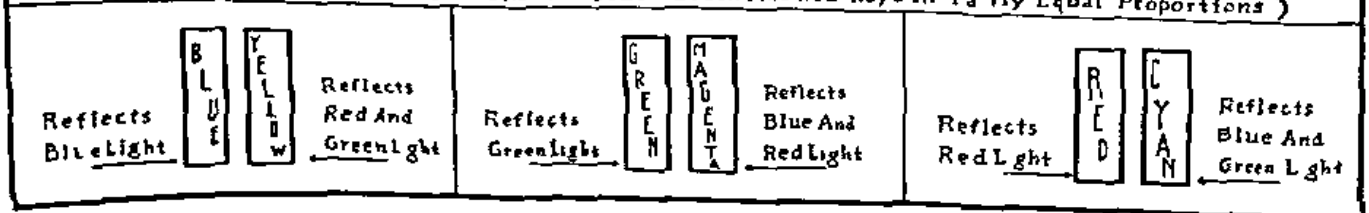
THE SUBTRACTIVE (or PIGMENT) PRIMARIES

The Colors Magenta Cyan And Yellow When Mixed Together In Various Proportions As Pigments (Inks Dyes Paints) Can Produce All Colors Either By Reflection As From A Painted Surface Or by Transmission As Through A Dyed Gelatine Filter



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Vol. II January, 1940 No. 12

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On the Cover

INTERNATIONAL PHOTOGRAPHER presents a photographic scoop in the first release of a publicity still showing Charles Chaplin at work on his forthcoming masterpiece, scheduled for release "sometime in 1910" Yes, that actually is the inimitable comedian—not the certain party you might mistake him for at first glance The genial cameraman is Roland Totheroh, member of Local 659, IATSE, who has been with Chaplin for 23 years As yet untitled, the eagerly awaited feature is known on the lot as "Production No 6"

Editor, HERBERT ALLER

Art Editor, JOHN CORYDON HILL, *Business Manager*, HELEN BOYCE

Contributing Editors LEWIS W PHYSIOC, FRED WESTERBERG, D K ALLISON, GEORGE HURRELL, J N A HAWKINS, PAUL R CRAMER, WILLIAM COMYNS, G M HAINES

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INTERNATIONAL PHOTOGRAPHER, as the monthly official publication of International Photographers, Local 659, of the International Alliance of Theatrical Stage Employees and Moving Picture Machine Operators of the United States and Canada, not only represents the entire personnel of photographers engaged in professional production of motion pictures in the United States and Canada, but also serves technicians in the studios and theatres, who are members of the International Alliance, as well as executives and creative artists of the production community and executives and engineers of the manufacturing organizations serving the motion picture industry INTERNATIONAL PHOTOGRAPHER assumes no responsibility for the return of unsolicited manuscripts or material

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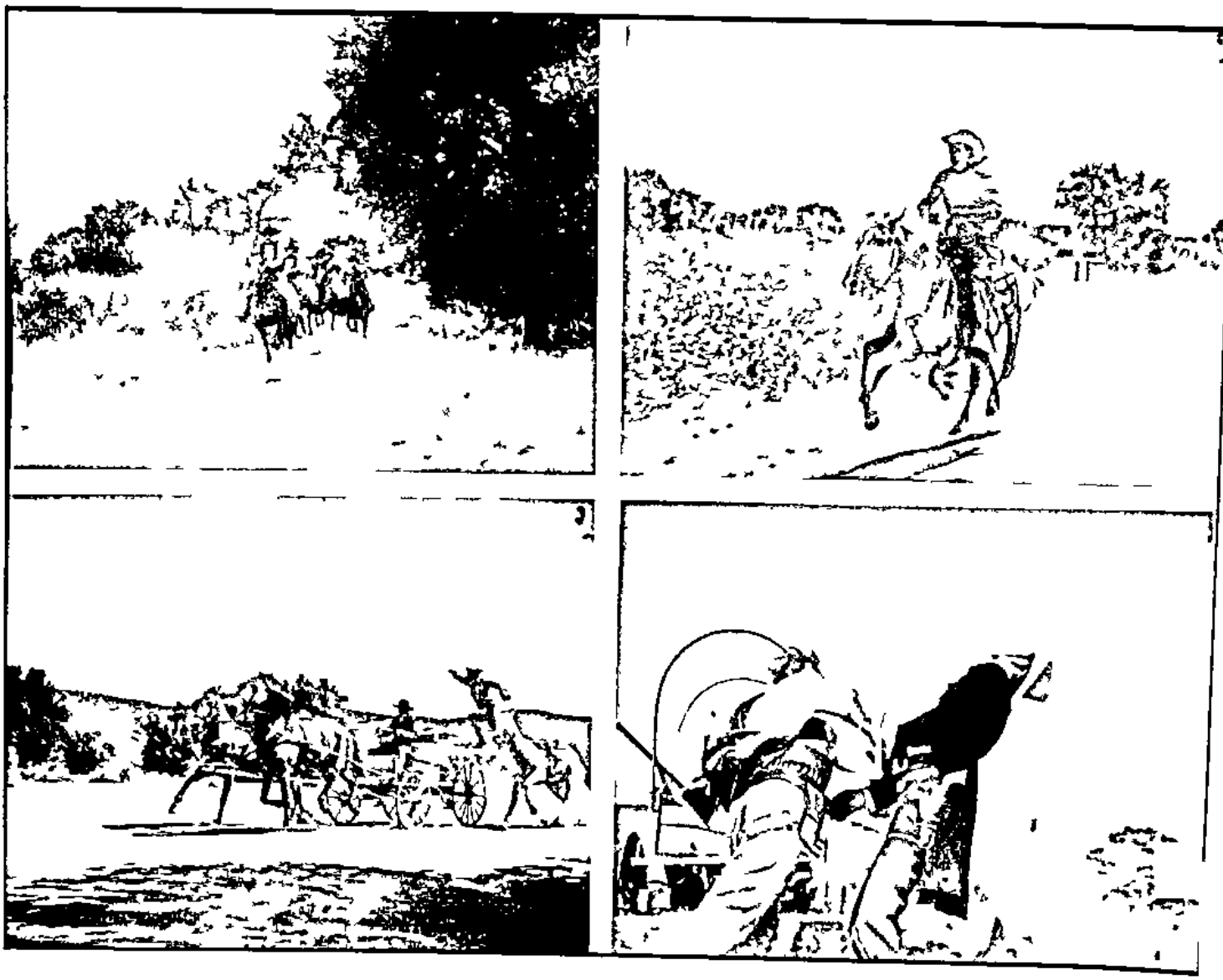
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MOVEMENT CAUGHT by CAMERA

THESE pictures are used as an example of the old adage that Good or bad action will always give a picture movement sufficient to keep an audience interested" However action cannot be intelligently expressed without the daring and unique efforts of the cameraman

Years ago it was customary to set up the camera and shoot the scene in ordinary straight fashion without angles of movement Today realism is brought home by portraying a scene with a continuous flow of action that stirs the theatregoer to a point where he feels himself part of the action

A quick examination of these pictures explains movement To the painter or composer it might mean rhythm First we have a chase second the entrance of the hero third the overtaking of the villain and finally the fight which results in the hero's triumph

The stillman has to visualize a series of events, from the time shooting starts until it ends, which will best illustrate the greatest essential of Western pictures *i.e.*, MOVEMENT or continuous action The first cameraman in conjunction with the second resourcefully plan their shots for the same purpose For instance the chase sequence involving the fight with the Indians in "Stage Coach" was the best definition of photographic movement that the year 1939 brought to the screen Cameras to the right cameras to the left cameras in front cameras in the rear, were set up to carry this procession of war like combat culminating in victory for the adventurous hero —*H A*

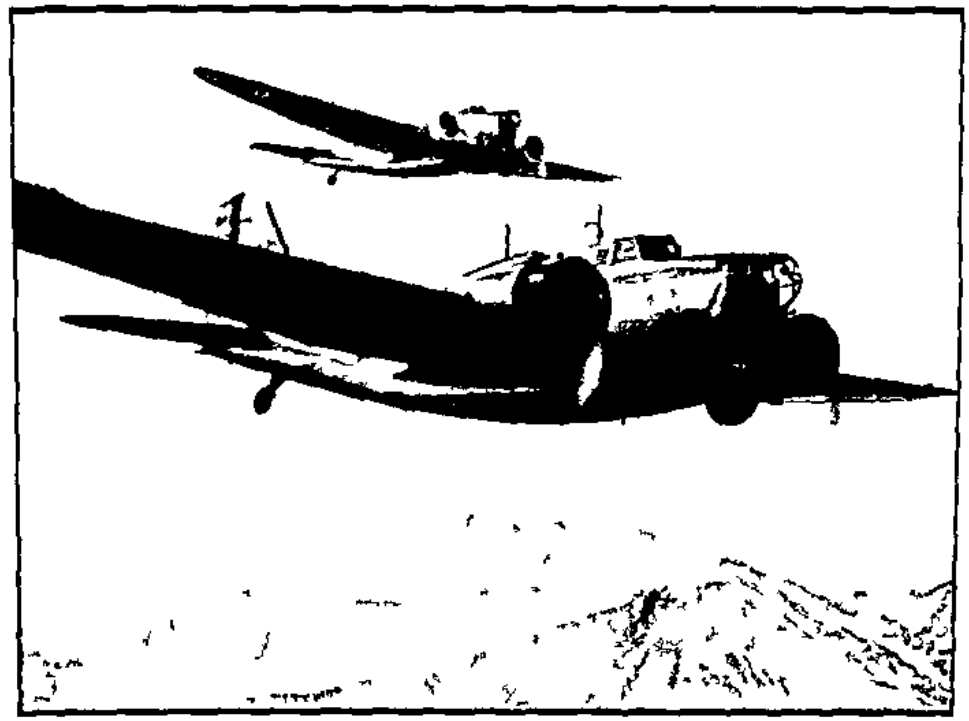
five hours by air

Competition is the life of trade but cooperation is essential among newsreel cameramen when they ask the Army or Navy to help get difficult subjects such as showing America's highest and lowest points, as related in this article

By MARSHALL C McCARROLL

The Author

Last month's *International Photographer* carried a story on the honor accorded Marshall McCarroll by the Tele-View Theatre for outstanding work he performed in the newsreel field during 1939 in connection with the American visit of the British King and Queen. A Paramount News Cameraman he is a veteran member of Local 659, IATSE.



Two of the U. S. Army's type B-18A Douglas Bombers used on the newsreel flight over Mt. Whitney, top of the United States

WE HAVE just reached 13,000—you had better get your oxygen tubes ready. We are climbing fast and you will soon need them" came the voice of Chief Pilot Herlick over the interphone. Lieut. Herlick was in command of ship R-31, a late "B-18A" type two motored Douglas bomber from March Field, California.

The above instruction was given for the benefit of Mervyn Freeman and myself who were on a camera assignment in ship "31". We were headed for a spot above the top of Mt. Whitney, which reaches into the sky 14,495 feet. The purpose of the flight was to get a story of contrasts between the cold and snow of Mt. Whitney, America's higest peak, and the heat and desolation of Death Valley, our lowest point.

To inject action into the picture March Field authorities provided a formation of three "B-18A's" to fly over the mountains while we were shooting. Thus our trip was from March Field to Mt. Whitney, then a long fast dive down to Death Valley, below sea level, and return to March Field.

Oh yes! that oxygen! I did as the pilot advised and opened the valve on the oxygen tank close beside me. You see I was riding in the bombardier's closed in compartment in the nose of the plane and being slightly separated from the main cabin a separate oxygen tank was provided. Other tanks supplied the crew and Freeman who was shooting out the door near the rear of the plane. This oxygen business fascinated me for it was my first experience in the use of it.

As we climbed steadily to a maximum of 17,000 feet to fly over the mountains I experimented a little. I would work without it until things began to go black, which occurred in four or five minutes, then by putting the oxygen tube into my mouth and breathing from it, I was surprised to find that in just exactly one minute's time everything would become normal again. Great stuff this oxygen!

Perhaps you are wondering why a Pathe cameraman and a Paramount cameraman were working on the same story and in the same plane. This makes an interesting topic of discussion as it is only on this type of occasion that much cooperation between competitive newsreel companies is evident. The Army and Navy have a ruling that whenever several newsreel companies request a similar picture they shall be accommodated simultaneously and equally. The Army further rules that when circumstances prevent a cameraman from each company making his own complete story, due to lack of Army facilities, a "rotation" arrangement be worked out and all exposed film pooled so that all companies have access to everything shot. In this case all five newsreel companies had requested the flight but only one camera plane was available so that meant drawing lots to determine who would do the shooting.

Among ourselves we decided upon three shooting positions—one in the door of the camera ship shooting toward the side drawn by Freeman, one in the nose looking forward and down drawn by me, and one in a formation plane to make close ups and cut in shots of the pilots, etc., which was drawn by Frank Blackwell of Universal. Sanford Greenwald of News of the Day and Al Brick of Movietone, drew the ships calling for build up material on the ground. Thus each company had one man working, obtaining the benefit of five camera locations, and at the same time causing the least inconvenience to the Army.

We anticipated extreme cold around Mt. Whitney, so Freeman and I dressed in furlined flying suits, shoes and helmets. We found later that the temperature indicator in the cabin fell to minus 20 degrees C., which is just a little below zero as we know it. Mervyn Freeman was very glad he had the warm clothing because working in an open doorway with a terrific wind blast was certainly not so hot. Especially did I sense the cold when he looked down at the solidly frozen mountain lakes plainly visi-

What the well dressed newsreel cameraman wears on a high altitude flight is demonstrated here by Mervyn Freeman (right) and Marshall McCarroll, author of the accompanying article. Freeman, of Pathe News is known as 'The Lindbergh of the Newsreel' while McCarroll, of Paramount News, has been dubbed 'The Flying News reel Parson.' Behind them is the camera setup in the Army Bomber from which the shooting was done



ble among the peaks of the High Sierra Everybody was much surprised and disappointed to find Mt Whitney completely bare At this time of year we anticipated beautiful snow scenes but apparently our "unusual hot Fall weather with lack of rain and snow had allowed Mt Whitney to shed its white mantle

In the nose of the plane I was quite comfortable in the zero weather due to the modern conveniences installed in Army bombers A far cry from the days of old this plane had a forced draft hot air heating system which keeps the pilots and crew warm under all conditions In fact while *Mervyn and his camera were both slowly* freezing up in the open doorway in the rear I was forced to remove my flying suit in order to keep from perspiring Black well working in plane No 64 in the formation also had the benefit of the heating system

Having arrived at Mt Whitney the three planes flew over and around the peak several times while we ground enough film for our story Due to bumpy air over the mountains it was difficult to get smooth shots This forced us to circle around that vicinity for about an hour before each cameraman signaled the pilot Okay This bumpy flying had its effect upon the stomachs of each of us to a greater or lesser degree I just managed to contain myself but one of the still men riding with us lost control completely and was forced to withdraw from the combat

After that it was but a half hour s glide from 17 000 feet down to the north end of Death Valley We started in near Scotty s castle *and flew* below sea level over the sand dunes and salt beds, coming out the south end of the Valley then up over the San Bernardino mountains through Cajon Pass, landing at March Field just five hours after leaving our starting point

Through the eyes of the five newsreel men who covered this story over 50 million people in the United States will see on the screen of their favorite movie theatre the highest and lowest points of our great country in less than a minute's time but it took us five hours by air to make this possible

ARE PHOTOMETERS NECESSARY?

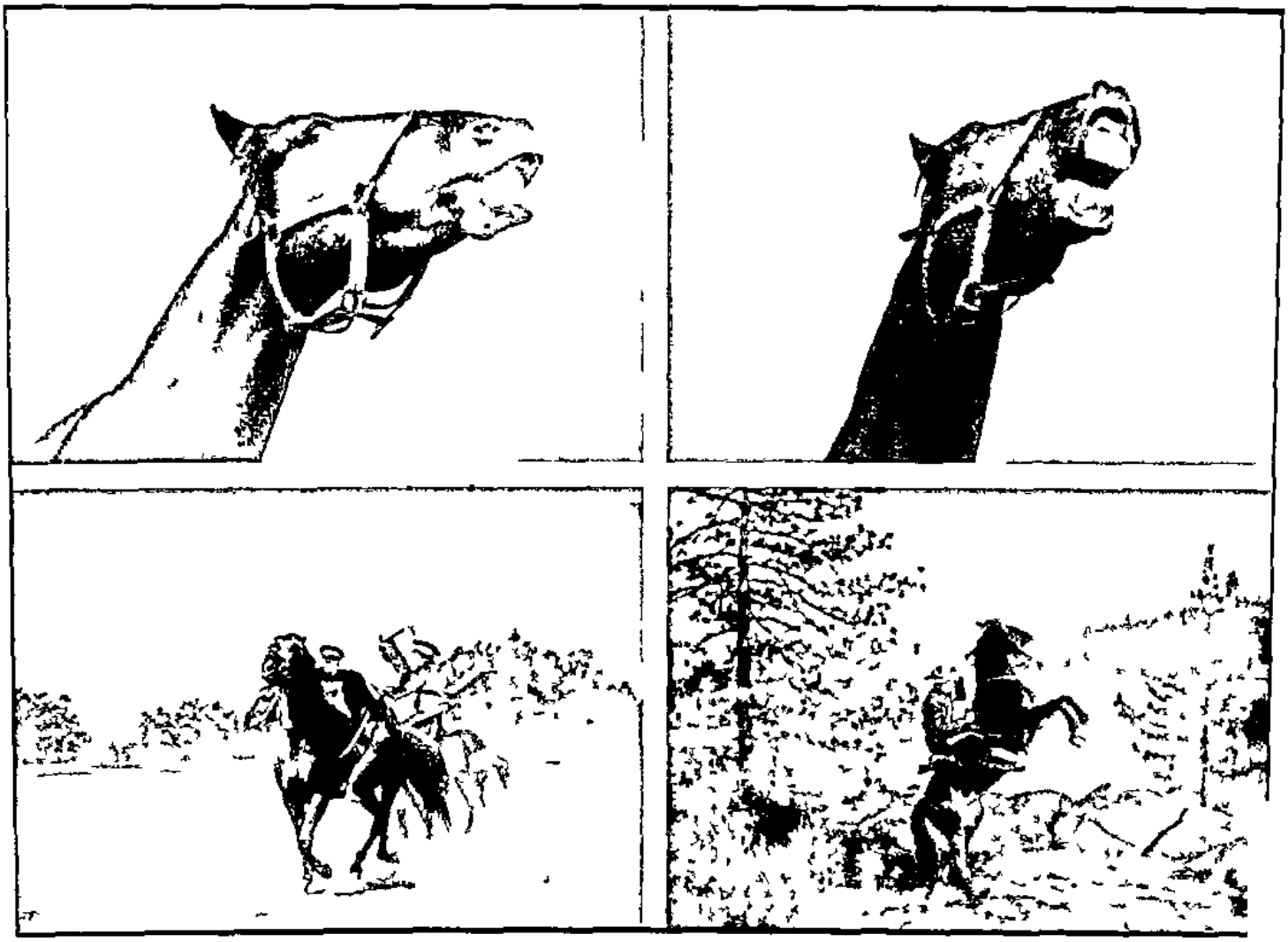
(Continued from Page 6)

bounces almost directly back to the camera

For example if the sun is top back light you would probably use some filler or reflectors on the faces and balance your exposure for this secondary light But if you re photographing a more or less flat scene say for a process background or an extreme longshot, the illumination is mainly a sort of kicker light and the brightness meter would be most helpful

Instructions on the actual use of reflection meters is well covered in the Weston and General Electric booklets included with their meters and in numerous other instructions and articles The simplest instructions should of course be taken with a grain of salt and particular study be given those sections dealing with exposure for highlights and shadows or for a particular object, or the brightest or the darkest object in the scene Checking back with film clippings helps build confidence in the meter and also permits the choice of a definite factor for certain types of scenes

A following article will consider the design of professional model photometers, dealing with an analysis of suggestions made by numerous cameramen, and giving definite features that meters of this sort should have Yet we should always bear in mind that more important than the *design* of the meter is the intelligent use of it



What's this? A horse laugh it would appear Note the snicker just getting under way at right then blossoming into a hearty haw haw If there is a horse doctor in the audience when these scenes from Pete Smith's new specialty Maintain the Right is shown he can easily tell how old the equine actor is Above are colorful action scenes from this odyssey of the Mounties the filming of which is described in the accompanying article by Willard Vanderveer member of Local 659 IATSE

Arc Projection Improved

● A new type of carbon said to produce illumination much higher in red ray content than heretofore available in arc lamp projection is announced by the Bell & Howell Company and is said to be of major importance in the projection of 16 mm Kodachrome film

All Kodachrome film is especially corrected for projection with incandescent light which is high in red content and when this film is screened with arc lamp illumination which is deficient in red there is a slight coldness of color With the introduction of the new type carbon this deficiency has been overcome says Bell & Howell and the colors in Kodachrome will screen in their true warmth and tonal values Projection of black and white film remains unchanged

For further information write to the Bell & Howell Company 1801 Larchmont Avenue Chicago Illinois

Filmo Projector

● Just announced is the new Filmo Master 8 Projector latest product of the Bell & Howell engineering laboratories The Filmo Master 8 is fundamentally the same as its highly successful predecessor the Model 122 Filmo 8 but the new unit is said to be refined and improved to a remarkable degree

New features of the Filmo Master 8 are rack and pinion tilt whereby the picture is positioned on the screen simply by turning a knob centralized switch panel with separate controls for both lamp and motor mounted on the base of the projector improved mechanism construction tripod socket beneath the base permitting any American tripod to be used as a projector stand radio interference eliminator allowing radio music in the same room during projection without electrical interference lens lock as on Filmo 16 mm projectors permitting the projection lens to be locked firmly in position after it is focused Distinctive in appearance the new projector is smartly finished in ebony black with chromium trim

Like his predecessor the Filmo Master 8 has the B&H film protecting side-tension feature all gear drive electric rewind still picture clutch framing device and ability to take 300 40 or 500 watt lamps There is no increase in price despite the increased utility of this newest Filmo

For further information write to Bell & Howell Company 1801 Larchmont Avenue, Chicago Illinois

(Continued from Page 9)

me with frames of film cut from his picture at the place where the insert goes in. With the aid of a jeweler's glass (indispensable to me) I choose from the frames the "hand props" or wardrobe that are in the immediate vicinity of the gag that's to be inserted. Of course before these can be selected the correct camera angle has to be determined to decide what props will be included in the background of the shot. Too, there's often a matter of some construction—a section of a wall or a door, etc. The necessary odds and ends having been determined, the departments heads involved are notified that I shoot day after tomorrow (property, wardrobe, construction, etc., and that such and such will be required.

In the meantime whatever newspaper copy is deemed necessary for the picture has been sent to the press (the Hays Press in Hollywood provides a major portion of the studios with all printed matter for insert purposes).

All the detail work that is preliminary to shooting is by a wide margin the most exacting and interesting part of the whole procedure. Photographing the items that are the combined efforts of several departments is, in my opinion, of no particular moment for the purposes of this article, except that I might point out the fact that a great deal of expense on prop rentals and construction is often avoided due to the inherent lack of depth of focus in all lenses when they're focused on an object at extremely close range.

Because of this universally recognized characteristic in lenses, if an insert is to be shot of a very small item and very close, we know beforehand that whatever background is picked up by the camera will be so badly out of focus that its identity will be lost and consequently we can "cheat" a good deal if need be in providing that background with props or construction to match the material used on production.

Then, too, even if expense isn't to be considered, frequently the prop I want is in active use on another set or has been rented to another studio. In any event I can't get my hands on it. So the insert is shot with a three or four inch lens, definitely insuring an out of focus background and no one is ever the wiser.

The work has, from time to time, led me into strange by paths, really not concerned with the business of inserts at all. For example, it is the custom at my studio for writers to suggest in a script the headline needed for a newspaper, but seldom a sub-head and almost never the text of the story. I write these and submit them to the producer for his approval before they are sent to the press. And because this material is often in a "period" story (i.e. the picture is approximately "dated" as occurring in the middle 1800's for example) or it may have a foreign locale, such as some part of South America, there is naturally a need for specific, detailed research that the finished printed matter may be correct in its wording and make-up.

Having done this work in close collaboration with the producers, it became not an uncommon occurence for a producer or writer to call me for information in no way relating to inserts.

I've been asked for the precise wording (if any) used in Mexico in a civil marriage ceremony, and if there were prisons (State or Federal) that housed both male and female inmates within the same walls. And what is the wording of the oath administered to cadets at Pensicola? What is the greatest depth to which a diver has ever descended and what is the greatest recorded velocity of a hurricane? I could go on with rather a staggering list. The point is that this research has been required and it's been a whale of a lot of fun digging up the material. It's something of a neat game to see first how long it will take to figure where to look or whom to write or phone in order to get an authoritative reply in the shortest time possible for an insert.

Fluorescent Lamp as a Key Light

Advantages of new type lamps, with practical suggestions for placement, told by cameramen from the Twentieth Century Fox Portrait Galleries

By GENE KORNMAN and FRANK POWOLNY

Within the past few months since the introduction of the Fluorescent type lamp units, many conflicting opinions and ideas have been expressed.

Color, size and number of tubes, distance from subject, fill in lights and many other points are still being debated. Experience and time will give the final answer, but the results we have obtained to date will, we hope, be of interest to those who, like ourselves, are still looking for that perfect photographic light—cool and powerful.

In the Fluorescent lamp we all recognize a light similar in quality to the good old north skylight. If we wish to return to the old fashioned flat portraits, then the Fluorescent alone comes as near duplicating the north light value as any artificial light source.

After many tests and experiments, we are producing certain portraits in our galleries using the Fluorescent unit as a key light. We hope that the ideas and information which we give here may be of some value to other photographers.

Fluorescent lamps have many outstanding advantages as a photographing light source. They are actually cool and free from the disturbing glare of the incandescent or arc lights. All photographers will appreciate the long life of these lamps (2,000 hours) and the fact that their consumption of electric current is very low. The actinic value of the light from Fluorescents is much greater per watt.

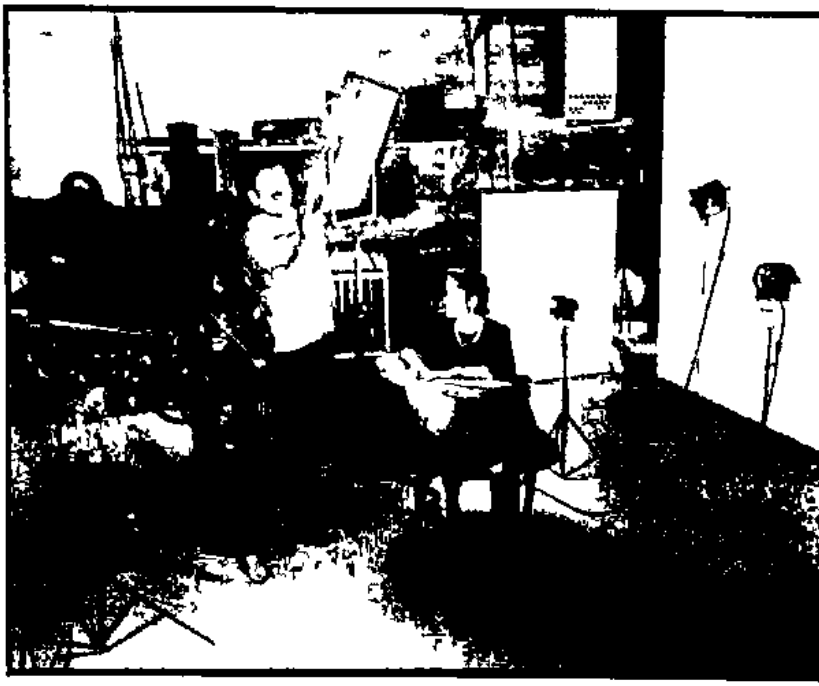
We are of the opinion that Fluorescent units will find a place in the average portrait gallery. A definite gain in efficiency of operation and comfort to the subject has been made.

There are, of course, limitations to the use of the Fluorescent unit. It does not have the carrying power of the tungsten filament or arc equipment. This must be recognized by the photographer and for this reason the lights must be used closer to the subject, which can be done without discomfort.

There is a great difference between various Fluorescent units. Many of them must be used within two or three feet of the subject. The particular unit which we are using at the present time and which is illustrated in the accompanying photographs can be used at a distance of five or six feet, as will be noted by the diagram. This particular lamp has another advantage in that the stand is spring balanced and can be set at any height with very little effort. It is also equipped with a special low bracket, permitting it to be lowered within a few inches from the floor.

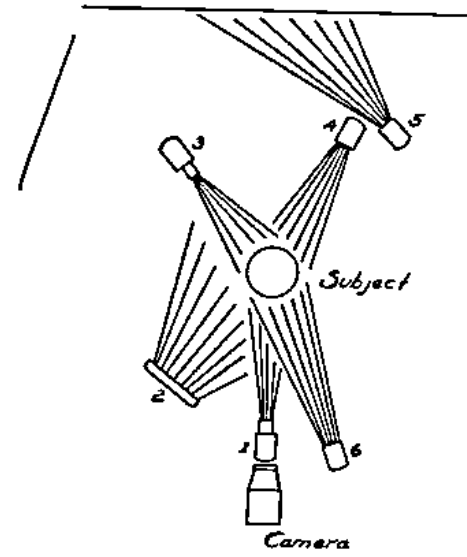
In order to use the Fluorescent to produce portraits with roundness and shadow value it is necessary to use some form of auxiliary lighting. Our first attempt to use the ordinary spot lights as fillers resulted in burning up the value of the Fluorescent light. Care should be exercised in using high wattage units no matter how heavily diffused, as they tend to take away that softness and depth of focus which distinguishes portraits made with the Fluorescent.

As filler lights in the accompanying portrait, we used the Dinky Inkie 100-150-watt incandescent spot light—so popular with motion picture cameramen. It is so small that it can be placed near the subject. The quality and intensity of the light





Backstage shot by Frank Powolny shows Gene Kornmann co author of article on Fluorescent lamps and Mrs Powolny and illustrates lighting setup The portrait of Mrs Powalny is by Kornmann Both men are members of Local 659 IATSE



DETAILS OF LIGHTING DIAGRAM

LIGHT No 1 Three and one half feet high, diffused with two Fiber glas diffusers equipped with No 2 snoot, four and one half feet from subject focused at No 3 This light is directly under camera lens

LIGHT No 2 Bardwell & McAlister Fluorescent unit burning eight G E new white tubes, five and one half feet from subject height six feet to center of light four feet from camera to center of light

LIGHT No 3 Three feet high three and one half feet from subject focused at No 2 no diffusion equipped with No 1 snoot highlights right side of subject s face and hair

LIGHT No 4 Five and one half feet high four feet from subject focused at No 3½ no diffusion highlights top of head

LIGHT No 5 Four feet high six feet from subject three feet from background focused at full flood no diffusion lights background at angle of about 45 degrees

LIGHT No 6 Three feet high three feet to right of camera eight feet from subject focused at full flood, one Fiberglas diffuser this is the filler light striking left side of subject's face and giving por trait roundness

EXPOSURE F-8
TIME One fifth of a second
CAMERA 8 x10 with 20 focal length lens
FILM Eastman Super XX

is so well and easily controlled by the in stant focusing device that it is in effect a brush light to wipe away shadows mod el and brighten skin and hair texture and you will note how well the light on the background blends w th the entire l ghting key

The soft quality of the Fluorescent light does not contract the pupils of the eyes—as do most artificial lights—and we all know how important this is particularly with children

The backstage shot shows exactly how the Dinky Inkies and the Fluorescent lights were placed The lighting diagram and descript on may give you a few pointers which we have learned after many hours of hard work

With low key lighting it is of course a problem at times to retain detail of eyes, hair and skin texture There is no question about the superior quality and actinic value of the light from the Fluorescent The problem is—to keep the portrait soft yet with sufficient roundness and depth to give it personality

For certain types of portrait work the Fluorescent units will be greatly in de mand and we have found the combination of lights suggested above most efficient



Colored cast p ctures no c are l eing produce l on a major scale a d like th e regular studio prod ct ons they em brace th e famil r th enes of romance soc ety comedy and gangsters St lls from some recent releases are sl o n above the shots at top and lower right being by Lin ls ley Th orrson while Joseph Ne c d d th e one at lower left Both men are members of Local 659 I ATSE

Here you see some of the favor te Negro actors At the top left in a scene fro s D uble Deal are F E Miller Monte Harley an l Florence O Brien at right in Merrie Hou e Cafe are Freddie Jackson Jennie Le Gon and Monte Harley with Miller and Miss O Brien stan l g Both are Argus Productions At lower left are Troy Brown an l featur l players in Rodeo Rhythm" a George Kandol production In the "gripping scene at right from "Double Deal are E ld e Thompson and Fre l lie Jackson

NEWS OF THE MONTH

Reflection "Blackout"

● Experiments which may revolutionize photography are being conducted at MGM by O O Leccarini, mathematician in the sound department and developer of important processes in color photography He is processing transparent films of sodium and magnesium fluoride on camera lenses These eliminate any surface reflections on a lens, as well as reflections within the lens barrel Greater speed is thus given lenses, with no chance of any disturbances set up by reflections within them

MGM Camera Group

● Members of the MGM camera group have been informed that the twenty third Annual Salon of Pictorial Photography will be held in the Los Angeles Museum this month Members of the group may enter their prints in this salon

Subjects for the November salon were the MGM picnic and action stills In the picnic group Leo Moore took the first two places and won the popular award for the advanced class In the action group Jack Barsby placed first Leo Moore second and Jack Barsby third for the advanced class The next salon features character studies animals and pets

Russell Harlan Signs

● Harry Sherman who produced the Hopalong Cassidy and Zane Grey pictures for Paramount last month re-signed Russell Harlan ace cameraman and member of Local 659 IATSE on a long term contract Harlan has been busy photographing Hold Your Horses starring William Boyd

Unique Color Use in "Irene"

● Innovations calling for a new dramatic use of color in several Technicolor scenes from "Irene RKO Radio's forthcoming comedy with music have been announced

Alice Blue Gown number with Anna Neagle will be filmed in Technicolor—but only Miss Neagle and her costume will appear in full color Everything else in the scene including other plays and the entire setting will be in black white and shades of gray, lending dramatic emphasis to the sole note of bright color presented by Miss Neagle in her blue gown

Because nothing of the sort has been attempted since the advent of color in pictures, Wilcox withheld announcement of his novel plans until weeks of experimentation had assured him of the practicability of the innovation

"Featurets" for 1940

● The Brooklyn and Hollywood units of Warner Bros featuret division will be combined under the supervision of Gordon Hollingshead on the West Coast for the production in 1940 of the largest number of short musicals, comedies and historical studies yet scheduled by the company The new featuret program will be inaugurated in March

Popularity of the featurets, three of which have won Academy Awards, has prompted Warner Bros studio to give Hollingshead the "go" signal for the expansion of writing acting and directing staffs

In addition to "The American Parade" featurets which are filmed in Technicolor, Hollingshead will produce six featurets in which Elsa Maxwell will star and demonstrate "How To Get Fun Out of Life

Already slated for Technicolor production are Discovery of America," which will show the exploit of Christopher Columbus, "Pony Express," in which Buffalo Bill will ride again, and "The American Cavalcade" which will be a composite feature bound together by a central theme of American progress

Cartoon Art Sold

● Art as a valuable by product of cartoon comedies received recognition in an unique business deal last month

The deal transfers from Fleischer Studios Inc producers of Gulliver's Travels and Paramount Pictures Inc, distributors of the picture all rights to exhibit and sale of the vivid and picturesque painting and sketches which were used in the picture

Purchasers of the art rights are the F A R Galleries of 19 East 61st Street New York City Following the exhibit of backgrounds and celluloids that this gallery will stage in New York City the celluloids and drawings will be mounted for resale to other art galleries and department stores about the country

The contract between the film corporation and the art galleries is said to be an innovation in motion picture history

Congratulations

● Word got around last month that Fred Kaifer was announcing the birth of a girl while Milton Gold, fellow member of Local 659 IATSE, was telling the world It's a boy!

Dave Smith Back

● Following a three months tour in which he covered the principal cities of the country, Dave Smith checked into town last month He was with Floyd Crosby, shooting "R E A"—an agricultural picture—for the United States Government

"Hands" Article Deferred

● Much interest was stimulated by Earnest Bachrach's article on "Hands" in the December issue of INTERNATIONAL PHOTOGRAPHER and it is with regret that the editor announces that the installment scheduled for this issue could not be secured because of heavy studio schedules and holiday interruptions Bachrach has been outstanding in the subtle use of hands in his portraits He has generously agreed to pass along to our readers valuable points he has picked up in his twenty five years experience in the photography field

—ED NOTE

Trailers

● Watch for the continuation of Tom Baily's historic document on the development of the trailer industry, an important cog in the promotion machinery of motion picture studios The second installment of this inside story will appear in INTERNATIONAL PHOTOGRAPHER for February Baily is director of the Hollywood Studios of National Screen Service where most of the world's trailers are produced

Bette Davis Wins Award

● Warner Bros. studio has been notified that Bette Davis is the winner of the "Motion Picture Award for 1939" presented by Redbook Magazine

The formal presentation of the award will be made to Miss Davis by Douglas W Churchill Redbook's motion picture editor on the Screen Guild radio program to be broadcast via CBS from Hollywood on Sunday January 14 The award will be in the form of a cup engraved as follows "For distinguished contributions to the art of the motion picture"

Miss Davis earned the award for her performances as Judith Traherne in "Dark Victory," Empress Carlotta in "Juarez," Charlotte in "The Old Maid and Queen Elizabeth in "The Private Lives of Elizabeth and Essex"

The star, who has won numerous other honors for her dramatic work, among them two Academy Awards, returned to Warners this month for her next starring vehicle, "All This and Heaven Too"



Use Tested Chemicals

TESTED EK CHEMICALS

BY using chemicals of certain strength and purity, most of your processing troubles will be avoided That's why Eastman Tested Chemicals, manufactured under laboratory control, are recommended in all Eastman formulas It's worth your while to be sure Eastman Kodak Company, Rochester, N Y

Specify EASTMAN TESTED CHEMICALS

TELEVISION

Industrial Films on Air

● Television broadcasts of industrial as well as other motion picture subjects are now being made with live broadcasts on a regular schedule from the Don Lee Broadcasting Company in Los Angeles.

Typical industrial films transmitted recently by the use of its 16 millimeter sound prints are "Helpful Henry," a comedy from the International Harvester Company; "Hawaiian Harvest," a thirty minute educational film from the California and Hawaiian Sugar Refining Corporation; and "Trees and Men," a forty minute picture from the Weyerhaeuser Timber Company; these being pictures produced by Dowling and Trownell of Hollywood.

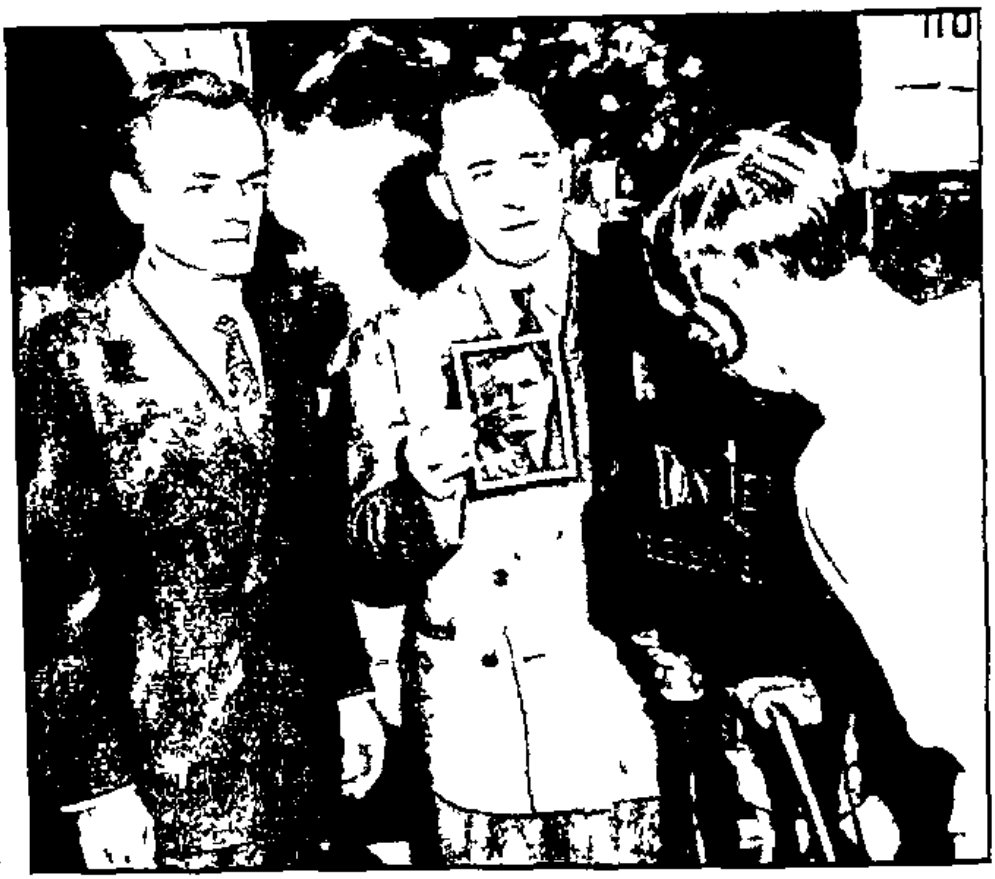
Approximately 800 television sets are in use in the thirty mile radius of territory now being reached from the Don Lee Los Angeles station. Programs are sent out on a regular schedule six days a week with motion pictures being used every day and with live broadcasts also being used three days a week.

Self-diffusing Bulb

● A new type of self-diffusing enlarger bulb has just been put out by the Wabash Photolamp Corp. "Super X Larger" as the new bulb is called, is made of glass that has been scientifically treated on the inside by a special process patented by Wabash and proved in production of over eight million incandescent lamps treated the same way during the past year. The manufacturer states that the inside-the-bulb treatment breaks up the raw filament light rays into soft diffused light that is distributed evenly and uniformly over the entire bulb surface in a brilliant white glow with less absorption of light and less heat. The smooth glass on the outside will not discolor, accumulate dirt, nor scratch, while the trade mark and number are etched on the neck of the bulb. Five different sizes with burning lives from 100 to 300 hours are now being made. Bulletin 718P describing the complete line can be had by writing Wabash Photolamp Corp., Brooklyn, N. Y.

Birdseye to Wabash

● Wabash Appliance Corporation, Brooklyn, N. Y., has acquired complete control of Birdseye Reflector Lamps and will market these nationally along with their Superflash and Superflood Photolamps. The Birdseye type of reflector lamp is lined on the inside with real silver to make a perfect reflector built into the lamp itself. The new Birdseye line which Wabash will announce shortly will include direct spotlites, direct floodlites and a new R type of photoflood bulb with built in inside silvered reflector made under the exclusive patents Wabash has acquired. This new bulb will combine a concentrated beam of light for highlighting with maximum soft diffusion for universal photo use.



In a scientific experiment to determine the future value of television in apprehension of criminals, District Attorney Buron Fitts of Los Angeles recently exhibited "mug" pictures of men badly wanted in Chicago and New York. These cities conduct perfect liason with local D.A.'s office. At left above is Thomas S. Lee, owner of W6XAO equipment over which experiment was conducted. Fitts is holding photos of fugitive from justice wanted in New York. Behind the camera is Nelson McEdward, veteran MGM assistant cameraman and member of Local 659, IATSE.

Texture Screens

● The response to the Agfa Texture Screens recently introduced in 8x10 size in four different patterns has been so favorable that the additional sizes—5x7" and 11x14"—have now been added to meet the growing demand. Both new sizes are being supplied separately or in sets of the four texture patterns—Satin, Oxford, Ripple and Homespun.

The 5x7" size is available at a list price of $1.50 per screen or $6 for the set of four which also includes an 8x10" border mask with 4" x6" etching edge opening.

The 11x14" size screens are available separately at $4 each or in sets of four at $12.50 per set. Border masks for the 11x14" size are not available and accordingly are not supplied in the 11x14" set.

These texture screens are made in U.S.A. by Agfa Ansco, Binghamton, New York and are available through regular photographic dealers.

Starts Twentieth Year

● Pere Westmore, head of the make up department and oldest contractee at the studios, starts his twentieth year at Warner Bros.-First National with a new contract.

Westmore's most recent wizardry was performed for "The Story of Dr. Ehrlich" starring Edward G. Robinson. Other notable Westmore work of recent years has been done for "The Story of Louis Pasteur," "The Life of Emile Zola," "Juarez," "The Hunchback of Notre Dame," "A Mid summer Night's Dream" and many others.

TRADEWINDS

Photoflood Lamps Control

● Designed to prolong the life of Photo flood lamps and assume comfort for sub jects while a picture is being arranged, a new Kodak Control for Photoflood Lamps is announced by the Eastman Kodak Co

The Kodak Control, a compact metal box less than six inches square, accommo dates up to six No 1 Photofloods or up to three No 2 Photoflood It plugs into any power line of 100 to 125 volts either A C or D C and four sockets are provided into which cords from Photoflood lamps may be plugged

During the time a person is being posed or a still life subject is being arranged the lamps may be burned at about half voltage through use of the 'dim" switch setting on the Kodak Control At this volt age the lamps emit enough light for work ing out a lighting scheme but heat and glare are greatly reduced This means add ed comfort for all persons engaged and helps in handling many still life subjects that are sensitive to heat

When a lighting scheme has been evolved and everything is ready for the exposure, lamps may be instantly switched to full brilliance for the few seconds necessary, then returned to the convenient low volt age during preparations for the next shot

For the Dark Room

● Willoughby's announce Willo Black" is now available to fill a long felt need for a coating substance for dark room trays tanks, etc It is said to be a strong deep black that is elastic and will not crack or blister The manufacturer recommends it also for waterproofing new materials and says it can be used as a surface preservative for almost any material It dries in two hours Pint size cans are 95 cents, quarts, $1 80

Ampro 8mm. Projector

● For 1940 the Ampro Corporation offers an 8mm projector that includes features of its 16mm machine An announcement from the Corporation states that "feature for feature, in design and construction the new Ampro '8' offers the 8mm fan the performance that 8mm films deserve" Points emphasized are still picture lever automatic safety shutter, reverse picture operation full 400 feet reel capacity if desired 500 watt illumination, complete range of film speeds, etc Price of the pro jector complete with lens, lamp, acces sories and carrying case, is $98 Catalog may be obtained by writing the Ampro Corp, 2839 North Western Ave Chicago

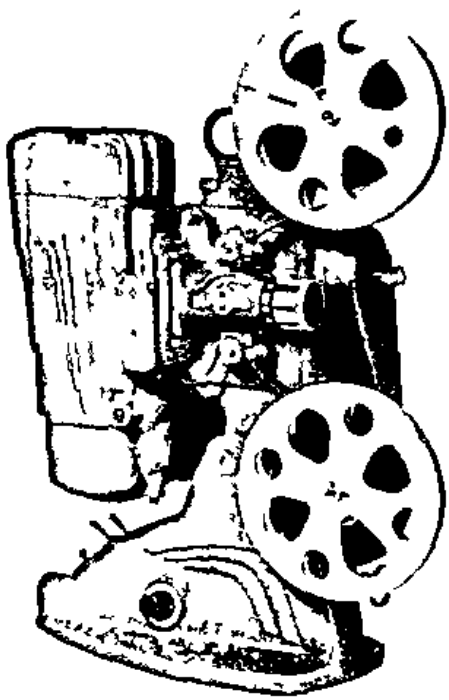
Blue Photoflash Lamp

● Development of a new photoflash lamp coated with a corrected blue filter lacquer —enabling photographers to take flash pic tures in color indoors or out day or night, and to get results as good as those obtain able under natural daylight — was an nounced last month by General Electric s lamp department at Nela Park

The new source called G E Mazda Pho toflash Lamp No 21 B is similar in con struction and shape to GE s synchro flash photobulb No 21 The new blue lamp is particularly suitable for use with daylight Kodachrome film

Because it makes available a wealth of photographic "balanced light," the new No 21B (B for blue) is said to be ideal for use in combination with natural daylight It is designed for use in taking colored pic tures by either the synchronized or open flash method Its flash is scientifically matched to outdoor color films

Essential technical data pertaining to the new No 21B lamp are Voltage range for operation, 3 to 125 Bulb A 19 Bulb diameter 2¾" Maximum all-over length 5", Base medium-screw List price 20c



New Speed Graphics

● Graflex are celebrating their Golden Anniversary in a fitting and tangible man ner After fifty years of manufacturing the cameras that have been the backbone of serious photography in America, they an nounce for January 10th delivery improved models of the 3¼x4¼ and 4x5 Speed Gra phics to be known as the "Anniversary Speed Graphics"

The new models are fit companions to the recently and widely acclaimed Minia ture 2¼x3¼ Speed Graphic They add a new versatility, convenience and attractive-ness to these larger cameras that have come to be the standard equipment of news and professional photographers and a fav orite instrument among advanced amateurs and hobbyists

New features of the Anniversary Speed Graphics are A lateral shift of the front standard in addition to the existing verti cal shift, a drop bed locking rigidly and well out of the field of wide angle lenses, a two piece linked track for rack and pin ion focusing of the wide-angle lenses, dual focusing controls for right hand and left hand operation, a track lock to fix the lens in position after a critical focus has been obtained, a one-piece all metal front standard, a new type of lock that fixes the front standard very rigidly, and a wire frame viewfinder that telescopes into the front standard when not in use, in addition to the existing parallax-correcting tubular viewfinder that has been accorded such en thusiastic approval by its users The bed of the new models is all metal, and it has been made possible to provide for a sim plified protected internal coupling of ac cessory rangefinders

Curtis Color printer

● Duplicate color prints (exclusive of the original) for practically the cost of black and white prints are now possible with the Curtis Color Printer and the Simplified Orthotone Process

The new simplicity and lower cost of these Curtis products have taken color printing out of what was once an almost exclusively professional field and placed it within the reach—as concerns both prac ticability and price—of the serious ama teur Any careful amateur who can turn out good black and white bromide prints can in a short time make acceptable color prints from his choice color transparencies The 4x5 Model K Color Printer, which sells for $50 factory assembled can be ob

tained in kit form ready for home assembly for only $16.50

The complete factual story of this new technique, illustrated with color plates, is contained in the latest Curtis book, 'Color Printing Simplified,' copy of which may be obtained by sending 25 cents to the Thomas S. Curtis Laboratories, 2063 East Gage Avenue, Huntington Park, Calif.

New Type Viewfinder

● The "positive" type viewfinder on Filmo 141 and Turret 8 Cameras is now being made available as an accessory for all Filmo 70 and Double Eight Cameras in the field, regardless of their age.

The viewfinder, known to Hollywood technicians as "positive," has two great advantages. First, the image remains fixed on the viewfinder glass, regardless of how the operator's eye may shift around the eyepiece. In other words, eye-parallax is eliminated—very important in close-up filming. Secondly, the full image always fills the entire viewfinder glass, no matter how long a telephoto or how short a wide-angle lens may be used. There is no masking of the field for the longer lenses.

Of special interest to owners of Filmo 70-D turret head cameras is the little viewfinder turret which mounts on the camera. It holds three positive objectives matching the three lenses on the camera turret, and may be installed at home. For single lens Filmo 70's, a single objective viewfinder is available. Owners of Filmo Double Eights may secure an auxiliary positive viewfinder which snaps on the camera in a moment. Positive objectives are available also to match all Filmo lenses for 8mm and 16mm cameras.

For further information write to Bell & Howell Company, 1801 Larchmont Avenue, Chicago.

Speed Flash Manual

● The third printing of the Kalart Speed Flash Manual is just off the press. More than 50,000 of these interesting 36-page manuals have been distributed throughout the country.

This newest edition contains complete information on Speed Flash photography including exposure charts for the various size flashbulbs—both the foil and wire types—as well as exposure recommendations for all films. Details on the use of the Micromatic Speed Flash with more than thirty of the most popular cameras is also given.

The manual is illustrated with various types of synchronized flash photographs. Information is also given for taking synchro-sunlight photographs.

A free copy of this manual may be secured by writing direct to the Kalart Company, 915 Broadway, New York, N. Y.

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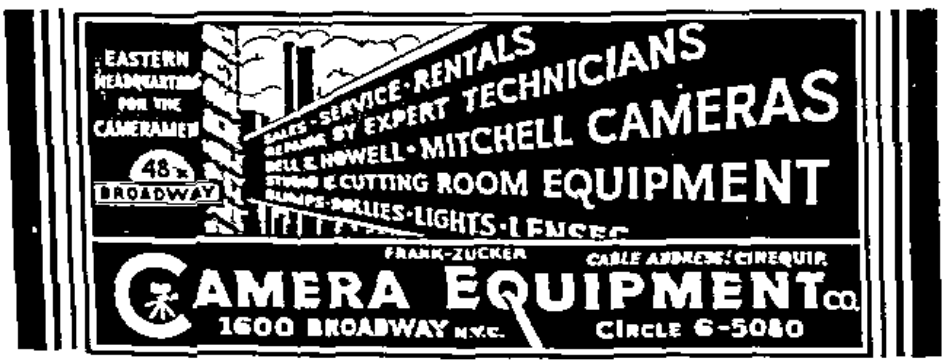
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"Mr. Chips" Voted Best

● "Goodbye Mr Chips" was the outstanding motion picture of 1939 and Robert Donat's performance in the title role of that film was the year's finest portrayal by an actor as voted by one hundred stars and featured players in the annual poll conducted by the North American Newspaper Alliance

Bette Davis characterization in "Dark Victory" was hailed as the finest performance by an actress The directorial palm went to Frank Capra for "Mr Smith Goes to Washington"

A board of judges composed of Cecil B DeMille James Roosevelt and Winfield Sheehan counted the ballots and prepared the final list of standings, in which "Mr Chips" beat out "Mr Smith" by one vote to win the "best production" honors

The ten best pictures of 1939 (released in Hollywood between December 10, 1938, and December 10 1939) as decreed by the actors themselves, together with the number of votes each received follows

1 "Goodbye Mr Chips" (78)
2. "Mr Smith Goes to Washington" (77)
3 "Pygmalion" (64)
4 "Wuthering Heights" (44)
5 "Ninotchka" (43)
6, 7 "Dark Victory" and "Love Affair" tied (42)
8. "Babes in Arms" (37)
9 "Stagecoach" (34)
10 "Bachelor Mother" (29)

Color Projection Screen

● Ivan Dmitri, well known Leica color photographer in conjunction with Mr Tew formerly of the B F Goodrich Rubber Co has been experimenting for some time to find a screen material which will best reproduce colored motor pictures and the small color transparencies made with miniature cameras

The result ha. been development of a new material not glaringly white but just the correct tone to bring out all of the beauty and depth of color pictures It also serves extremely well for black and white pictures. The screen is washable so that it can be kept clean at all times, and the pictures projected on it can be viewed from almost any angle in a room This material is now available in a new screen known as the Leitz Dmitri Projection Screen

Another advantageous factor has been included in the Leitz Dmitri Screen In many cases photographers are proud to exhibit their well made precis on camera and projection equipment. The same does not hold true for the screen With this in mind the Leitz Dmitri Screen is provided with an extremely well made case, covered with a deep brown material hav

ing an alligator skin pattern In addition the fittings are the best obtainable The entire screen in appearance is indeed a complement to fine precision camera equipment Full information on the Leitz Dmitri Screen can be obtained by writing to E Leitz In 730 Fifth Avenue New York New York

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Exhibitors Rate Stars

● Just as the proof of the pudding is in the eating so the proof of acting ability is in the exhibitors rating because the theatre operators are influenced largely if not exclusively by how well Mr or Miss Star packs them in to the neighborhood or first run houses

Independent and circuit exhibitors were polled again in 1939 by Fame—Motion Picture Herald to determine the 10 players whose pictures drew the greatest number of patrons to their theatres The questionnaire was mailed to 12 273 exhibitors

Results were surprising to some but others had called their shots pretty much as the exhibitors voted Certainly a great many had predicted for Mickey Rooney the rating of Number 1 box office star a position he earned by a big margin At any rate the box office has spoken and here is the verdict

The Leaders

	Combined Independent and Circuit Percentage
Mickey Rooney	870
Tyrone Power	677
Spencer Tracy	556
Clark Gable	412
Shirley Temple	339
Bette Davis	315
Alice Faye	271
Errol Flynn	253
James Cagney	226
Sonja Henie	219

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Conducting a chalk talk in the aerial photographic courses given by the American Air Reserve is 1st Lieut Thomas W Jones A A R formerly member of the U S Army Air Corps and veteran member of Local 165 IATSE At right is Col Grant H Stone commander-in-chief of the 1 1 R Division of Aeronautics Military Order of Guards U.S.A

primary and complementary colors

(Continued from Page 4)

which has been isolated from the rest of the spectrum, we would experience the sensation of a certain color—let us say a yellow green If, then we expose our eyes to a *mixture* of wave lengths—a produced by the blending of primary colors in the proper proportion—we would experience the *identical* sensation of color (that is the same yellow green) as that produced by the single wave-length of light striking the eye In this way the "dual" nature of color can be shown for the sensation of color can be stimulated either by (1) a single wave-length or (2) a mixture of wave-lengths An exception would be magenta and the purples for they are not found in the spectrum and therefore the sensation of these colors cannot be stimulated by a single wave length They are the result of mixing *the end colors of the spectrum* red and blue

An analysis of colors reflected from common objects all around us reveals that color as found in nature, is the result *not* of objects reflecting a single color stimulating wave length but of a mixture of wave-lengths[10] Yellow objects reflect green and red violet objects reflect red and blue

— B —

Since a blue pigment was described as one which absorbs both green and red rays and a yellow pigment one which absorbs blue rays it would seem that the result of mixing these two pigments should be black But we know from experience that this is not always the case for when we mix blue and yellow paints we get a green

The explanation for this is to be found in the behavior of pigments

The absorption and reflection of light rays by pigments is never accomplished with 100% efficiency In the mixing of blue and yellow paints the blue pigment will *not* do a thorough job of absorbing the green light falling on it Therefore under normal lighting conditions a considerable amount of green rays will be reflected And since the red and blue rays falling on this mixture *are* pretty well absorbed the resultant color will be green *(f)*[11]

— C —

Blue and red paints can be used to make magenta And blue and green paints can be mixed to form cyan (blue green) But green and red paints will not act similarly to form yellow Why? Because the pigments available today for use in making paints are not "pure colors In general they all reflect some percentage—however slight—of all colors[12] A pigment which reflects more green than blue or red is called green" and a pigment which reflects more red than green or blue is called "red' When green and red paints are mixed the proportion of various colors reflected is such as to produce a dirty, greenish gray, or a gravish, or muddy, or brick, red

If "purer' pigments should ever be obtained for making paints, green and red paint will combine to produce yellow[13]

— D —

The additive primaries are often given as Blue Violet Green and Red, or Blue Green and Red In either case the actual color referred to as "blue-violet" or "Blue" is—in modern photographic practice—the same The word "violet" is frequently dropped for the sake of brevity The color of the filter used is deep blue in appearance and transmit both the very short wave lengths which we call Violet, and the slightly longer wave-lengths, which we call Blue Although this filter cannot distinguish between pure violet and blue light violet colors can be reproduced because as a pigment they usually reflect a certain amount of red light—and blue and red together, when mixed in the proper proportions create the sensation of violet

— F —

The terms "additive" and "subtractive" primaries are accepted as standard[14]—and appropriately so—for they describe the "action" of these two separate sets of primaries However, it is suggested that the terms "light' and "pigment" primaries should also be accepted as standard for they describe what may may be called the 'nature of the two separate sets of primaries, and their meanings are more readily grasped by those who begin a study of this subject

The subtractive primaries could also be called the "Printing Primaries"[15] because they are used in making color photographic prints and in printing the color sections of magazines, etc (g)

This article attempts three things First, to bring together in a single treatment all the salient points about primary and complementary colors which are spread out in the literature of color The second is to answer those questions which naturally arise but are too often left unanswered. The third is to present the material in such a manner that it shall be clear and understandable, avoiding technical ramifications as much as possible without the sacrifice of authoritativeness

(f) In connection with this it should be added that yellow pigments reflect a large percentage of green light Also, the ability of blue pigments to absorb green differs from pigment to pigment. One which absorbs a great deal of green light will yield a dull olive green when mixed with yellow One which absorbs less green light will naturally produce a bright green paint mixture when blended with yellow

(g) The subtractive primaries are also called the "minus colors" because each one is minus (fails to reflect or transmit) one of the light primaries thus, magenta is called "minus-green" cyan is called "minus-red" and yellow is called "minus-blue"

[9] Same as (4), p 84

[10] Ibid

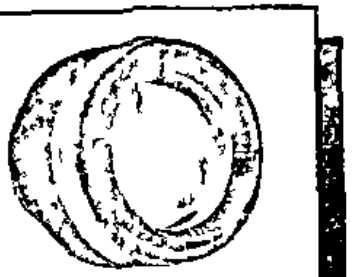
[11] Same as (1), p 124
Same as (6), p 11

[12] Same as (2), p 61

[13] Munsell A H "A Color Notation", Munsell Color Co (Baltimore, Md, 1926), p 51

[14] Same as (7)

[15] Same as (6) p 10 (the subtractive primaries are called "Printing Colors")



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PATENTS

By ROBERT W. FULWIDER

No 1,182,142—Dividing Polarized Light Beams *Joseph A Ball* and *Winton C Hoch*, assignors to Technicolor Motion Picture Corp Application Feb 12, 1937 9 claims

A device for splitting a beam of light, and making use of an intermittently inserted reflector and a compensator in front of the reflector for changing plane polarized light into elliptically polarized light

No 2,182,723—Film Winding Apparatus —*John E O Feller*, Canton Ohio Application April 20, 1937 8 claims

A device for winding a film with the leading end outermost

No 2,182,815—Color Forming Photographic Compositions and Processes —*Edmund B Middleton* and *Andrew B Jennings*, assignors to Du Pont Film Mfg Corp Application No 23, 1938 14 claims

A color forming photographic developer comprising an aromatic amino photographic developing agent and a dicyanacetamino bisazole

No 2 182 886—Film Treating Apparatus *Albert W Tondreau* assignor to Warner Bros Pictures, Inc Application March 4 1938 18 claims

A film treating apparatus having a tank with a removable frame to support and guide the film

No 2 182,993—Prismatic Screen—*Gabriel Garcia Moreno*, assignor to C M C Corp N Y Application July 31 1936 2 claims

A method of photographically producing a prismatic screen adapted for use in additive photography

No 2 183,068—Motion Picture Camera *Leo Goldhammer*, Germany, assignor to Agfa Ansco Corp Application April 7 1938 In Germany April 8, 1937 5 claims

A motion picture camera in which a pressure plate moves against the film when a film magazine is inserted in the camera

No 2 183,305 — Method of Obtaining Color Photographs *Anne Henri Jacque de Lassus St Genies* France Application Feb 19 1938 In France Mar 2, 1937 6 claims

A method of producing a colored image on a lenticular film by first taking a lenticular picture and then treating the resultant image

No 2 183,393—Process and Material for Producing Three Color Photographs and Cinematographic Pictures on a Transparent Film *Bela Gaspar*, Belgium Application No 16, 1932 In Germany No 17, 1931 26 claims

A process for printing color selection pictures onto a multi layer printing material having a transparent support and three light sensitive silver halide layers colored blue green, magenta, and yellow

No 2 183,394—Photographic Material and Process for the Production of Multicolor Pictures *Bela Gaspar*, Brussels-Forest, Belgium Application July 27, 1937 In Germany March 24, 1932 15 claims

A color film having at least three layers, each sensitized to one of three primary colors, one layer being colorless and sensitive to blue alone, and other layers already dyed and sensitive to different colors

No 2,183 395—Light Sensitive Material for Producing Photographic Dye Images *Bela Gaspar*, Belgium Application Jan 27, 1939 In Great Britain Dec 12, 1938 5 claims

A multi layer color film having one dye in one emulsion and another dye on a different shade and different bleaching speed in another layer, a catalyst being added to the first layer so that the bleaching speed of the first dye is substantially equal to that of the other dye

No 2 183,598—Making Color Pictures *Eastman A Weaver*, assignor to Comstock & Wescott, Inc, Mass Application Aug 8, 1935 21 claims

A method of making color pictures by making separate positive and negative prints of the different color records and using the negative of one color to correct the positive of another color to produce the proper coloring in a finished print

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No 2 183 733—METHOD AND APPARATUS FOR THE PROJECTION OF MOTION PICTURES. *Clarence S Ashcraft*, Long Island N Y Application Oct. 21 1938 5 claims

motion picture projector in which the frequency of electric current supplied the light source is such that one cycle is supplied while the shutter is open and one cycle is supplied while the shutter is closed

No 2 183 917—SOUND FILM SPLICE. *Raymond S Sumner* assignor to Radio Corp of America Application April 30 1938. 1 claim

A method of treating a sound film splice to reduce noise by spraying the splice with an opaque material and spraying the sound track with decreasing amounts of opaque material for a disance on either side of the splice

No 2 184 022—COLOR PHOTOGRAPHY *Merrill W Seymour* assignor to Eastman Kodak Co Application Sept 5, 1936 In Great Britain June 29 1936 10 claims

A method of producing color pictures by forming a silver image in a gelatine layer containing a vat dye, bleaching the dye in an alkaline stannous chloride solution in the region of the silver image, and removing the silver from the layer

No 2,184 023—BUFFERED PHOTOGRAPHIC EMULSION *Samuel E Sheppard* and *Raymond H Lambert* assignors to Eastman Kodak Co Application June 9 1936 5 claims

A method of making a buffered gelatine-silver halide emulsion having a substantially constant pH within an appreciable portion of the region pH 5 5 to pH 9.5

No 2,184 024—PHOTOGRAPHIC ANTIHALATION LAYER MADE FROM ALLOXAN *Samuel F Sheppard* and *Robert C Houck*, assignors to Eastman Kodak Co Application April 12, 1939 13 claims

A photographic element comprising a support having thereon a sensitive emulsion layer, and a layer of unsensitized gelatin containing a compound selected from the group consisting of alloxans, alloxantins and triketohydrindenehydrate

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INTERNATIONAL photographer

Vol. XII March, 1940 No. 2

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On the Cover

Raymond Massey as young Abe Lincoln appears in this study to be peering ahead through the years to the titanic events that now are numbered among the most impressive in the history of America This portrait is one of thousands of still shots made by Alex Kahle member of Local 659 IATSE during production of Abe Lincoln in Illinois, RKO Radio Gordon and Goetz production of Robert E Sherwood's dramatic classic

Editor HERBERT ALLER

Art Editor, JOHN CORYDON HILL *Business Manager* HELEN BOYCE

Contributing Editors LEWIS W PHYSIOC FRED WESTERBERG D K ALLISON GEORGE HURRELL, J N A HAWKINS PAUL R CRAMER WILLIAM COMYNS, G M HAINES

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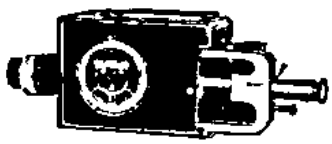
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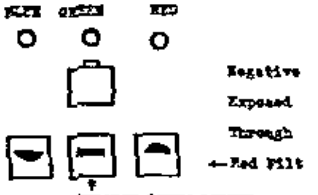
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The Principle of

PHOTOGRAPHING FOR REPRODUCTION IN NATURAL COLORS

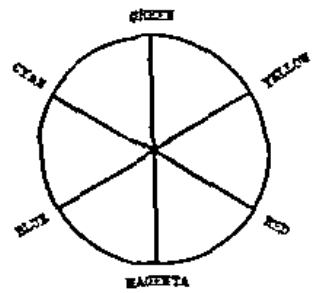
LIGHT IS PHOTOGRAPHED ON 3 SEPARATE NEGATIVES THROUGH BLUE, GREEN AND RED FILTERS



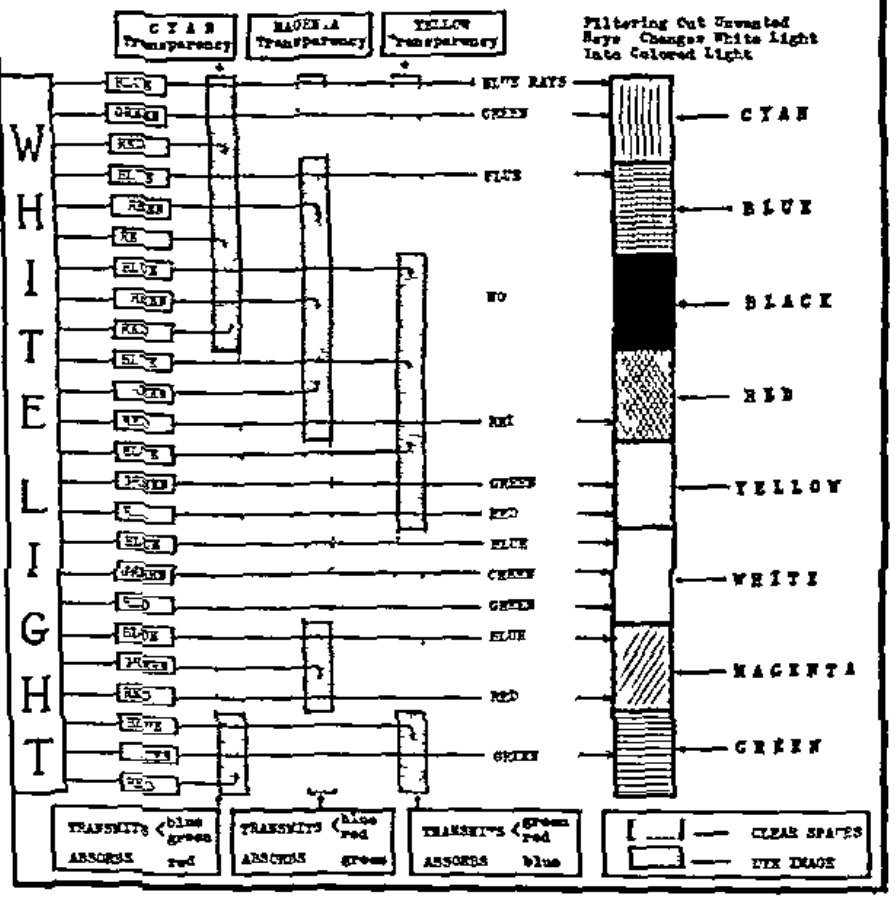


NEGATIVE EXPOSED THROUGH GREEN FILTER

COMPLEMENTARY COLORS



SUBTRACTIVE SYNTHESIS

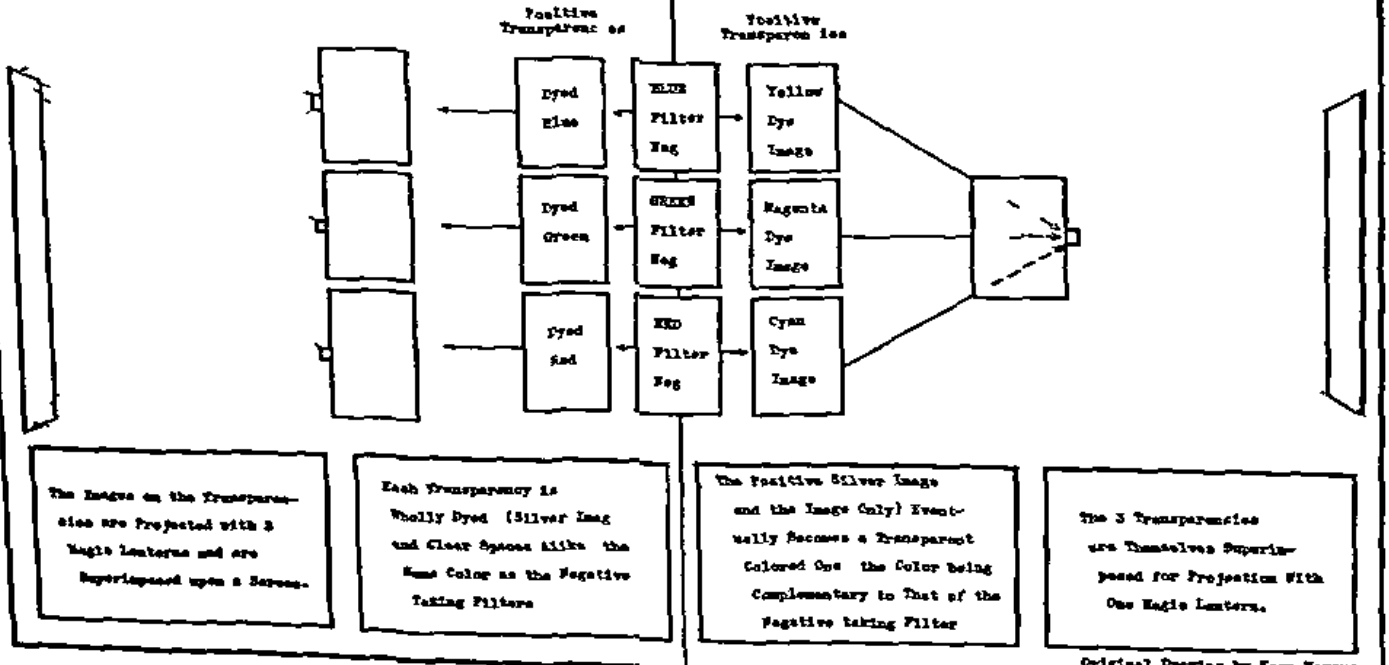


The Principle of Projection for

ADDITIVE SYNTHESIS

The Principle of Projection for

SUBTRACTIVE SYNTHESIS



The Images on the Transparencies are Projected with 3 Magic Lanterns and are Superimposed upon a Screen.

Each Transparency is Wholly Dyed (Silver Image and Clear Spaces Alike) the Same Color as the Negative Taking Filters

The Positive Silver Image and the Image Only) Eventually Becomes a Transparent Colored One the Color being Complementary to That of the Negative taking Filter

The 3 Transparencies are Themselves Superimposed for Projection With One Magic Lantern.

Original Drawing by Kaye Marcus

Original drawing by Kaye Marcus

THE THEORY OF 3-COLOR PHOTOGRAPHY

By KEVA MARCUS

PART I

WE HAVE seen that colored objects usually reflect various mixtures of short (blue) medium (green) and long (red) wave lengths of light and that Nature has apparently built into the eye an accommodating mechanism which responds to these three groups of wave lengths in such a manner as to evoke the various sensations of color.[1]

Let us suppose that this were not the case. Let us suppose that the physical structure of the Universe were such that each variation in color we saw was *not* the result of a few primaries being mixed, but the result of that object reflecting only a *single* wave length of light. A yellow object, then, would be one which reflected not green light and red light (which together give the sensation of yellow), but 'pure' yellow light. And an orange colored object would be one which did not reflect more red light than green light (the red sensitive portion of the eye being stimulated to a greater degree than the green sensitive portion thus creating the sensation of orange), but one which reflected "pure" orange light.

In such an event Nature would probably have built into the eye a different type of color seeing mechanism than we now have. It probably would have consisted of a series of fine nerve fibrils—like a string of piano wires—each sensitive to a different wave length of light, and responding to that one and no other. If there were twenty five such nerve fibrils in the eye then our sense of color would be limited to exactly twenty five hue sensations.

If these were the facts then the photographic reproduction of colors—as we know the art today—would be almost too involved to be practicable. *Imagine having to make twenty five color separation negatives!*

We can thank Nature for making it possible to produce all colors by the use of only three colors. Even this leaves us with a situation which is complicated enough. Consider the fact that most of the principles of color photography have been known almost as long as photography itself. But the enormity of the technical difficulties involved were such as to have delayed the arrival of their practical application until recent years.

In the early days of photography—and indeed, now too—there must have been those who hoped that some day some one would invent a photographic plate which upon exposure and development, would yield an image not only in light and shade but in colors too. A single emulsion that would do this implies that its various granules would "turn color" as a result of the light waves striking them. Although this would be the ideal method, such a request of the emulsion maker seems almost too much to ask for at the present time.

Another implication would be that upon exposure and development the particles of silver, of which an emulsion is composed would so arrange themselves that when white light passed through them they altered the light in such a way as to have it emerge in various wave-lengths (or colors) the same as the original colors of the object photographed. This would mean that light waves could be recorded in much the same manner as sound waves are recorded, for, sound waves *are* captured and frozen in wax or imprisoned on film. Examining a phonograph record or a motion picture sound track, one can actually see the waves which represent sounds.[2]

In regular everyday photography no waves, *as such,* are recorded. Light falling on a photographic emulsion causes clumps or deposits of silver to form in varying amounts depending upon the amount of light reaching each part of the negative. Some wave-lengths act more strongly than others in causing these silver deposits to form, and the shorter ones normally produce less contrast 'because the blue rays penetrate less easily into the depths of the emulsion'.[3] However, no more direct relationship exists between the length of the light wave striking the film and the deposits of silver which form.

All photographic emulsions are limited to the ability of interpreting light waves as different shades of gray. In this respect they can be likened to that rare individual who is born totally color blind. To him a bright yellow looks like a light gray, a medium red looks like a medium gray and a deep blue looks like a dark gray. To such an unfortunate person the drabness of a black and white picture is representative of the world he lives in.

We can deliberately make ourselves color blind by the simple expedient of entering a room which is very dimly lighted. If the amount of light in the room is small enough our sense of color disappears. A white ceiling will appear grayish white, a mahogany desk will go black, and the colored designs in the wallpaper—as well as the many colored objects in the room—will be seen as varying shades of gray.

If a photographic emulsion is similarly "color blind," how can we have photographs in color?

Long ago it was concluded that if colors could not be made to form directly in the emulsion itself, color photography might yet be achieved by approaching the problem *indirectly*.[4] The principle of forming various colors by the use of primary colors was known. Why, it was reasoned, could not this principle be utilized for photography? That is why not divide light into its primary constituents, make a photographic record of each and add the color later? This can be done with relative simplicity by making three photographs of the same object using three separate negatives. The first negative is exposed through a blue filter, the second is exposed through a green filter, and the third exposed through a red filter. Although each negative when developed will be *black and white* the image on the first negative will be caused solely by the blue rays falling on it, the image on the second negative will be caused by the green rays falling on it, and the image on the third negative will be caused by the red rays falling on it. It is because light has thus been *seperated* and recorded on three different negatives that the latter are called 'Three Color Separation Negatives".

Our next step is to make transparent positive prints—or lantern slides—from each of these negatives. The lantern slide made from the 'blue record negative" is then dyed blue, the slide made from the "green record negative" is dyed green, and the slide made from the 'red record negative' is dyed red. If these three lantern slides—or transparencies—are then placed in three magic lanterns and their images properly superimposed upon a white screen

(Continued on page 27)

(Editor's note: Part 2 will be devoted exclusively to an explanation of why in subtractive synthesis, the blue filter negative yields a yellow positive, the green filter negative yields a magenta positive, and the red filter negative yields a cyan positive.)

[1] See "Primary and Complementary Colors" INTERNATIONAL PHOTOGRAPHER January 1940 page 3.

[2] Something similar does take place in photography in the Lippman Process which is briefly described in E. J. Wall's "Practical Color Photography" and in "Color and Its Application" by Matthew Luckiesh. However the process is considered to be only a laboratory experiment without commercial possibilities.

[3] See section on "Contrasts" pp. 80-82 of reference in notation 5.

[4] Certain early experimenters were able to record colors directly but their results were crude and the images could not be fixed. (See Chapter on "Natural Color Photography" in Neblette's "Photography: Its Principles and Practice.")

photography "1,000,000 b. c."

By WM V DRAPER

★ **Technical experts solve intricate problems in photographing unusual film showing primitive tribes, steamy swamps, strange vegetation and giant animals of one million years ago, as envisioned by Hal Roach staff**

LAST FALL S S Van Keuren Hal Roach production manager summoned a company of technical experts and gave them a monumental assignment He asked them to re create a world of a million years ago

The task was in connection with the making of the Hal Roach prehistoric mo t on picture "1 000 000 B C. The tech nical experts were *told to achieve the effect* of raw steaming earth covered with anted luvian vegetation and populated with ex tinct beasts and cave people They were asked to develop phenomena never before een on the screen Van Keuren gave them a time schedule of 15 weeks and a budget f $50 000 to do it

It was sailing on uncharted waters for the experts They didn t know whether they could accomplish their chore at all let alone within the allotted time Yet on Friday January 26 just fourteen weeks after the starting date and seven weeks after the company proper had finished hooting the miniature crew of 1 000 000 B C deposited their ample supply of headache powders at Fay Snyders and Bert Jordans Cutting Room door and decided to call it a day They had completed just under schedule one of the most daring assignments ever undertaken in the field of photographic illusions

1 000 000 B C is a simple story of two primitive tribes It tells of the tedious process by which they advanced step-by step toward that state of orderly existence which the world still hopes might someday earn the right to be called civilized It becomes apparent at once that the value of *the story depends greatly on the setting* the steamy swamps the ever changing earth with its *strange vegetation* and above all the 100-foot monsters that thrived at that period

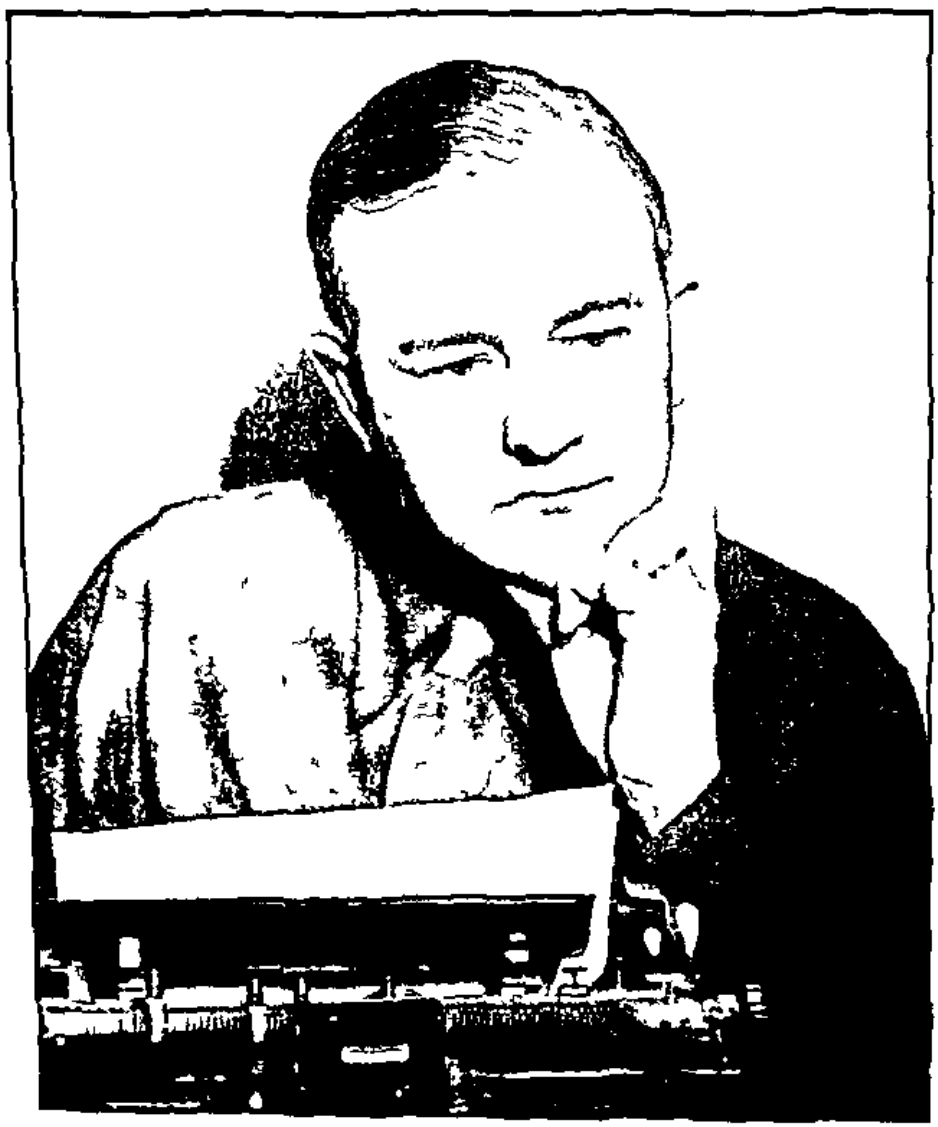
There is no animation whatever in the action of 1 000 000 B C All the animals are 100 per cent real miniature descendants, in many instances of the picture-book variety we have come to associate with early times Although in some cases they were aided and abetted by the art of make-up, they were nevertheless, in all instances real live animals

Anyone who has ever worked with a dog in pictures can guess something of the problem of shooting ferocious lizards, etc Dogs are almost human They are extremely desirous to please their masters Lizards are decidedly not human There is nothing to indicate that they ever had a thought The animals used in this picture were gathered from practically every point of the globe but despite their scattered origin they all have this one thing in common they do not care to please anyone They have absolutely no aspirations for a movie career They are not particularly concerned with eating The only trait that even remotely smacks of motion picture temperament is that "they want to be alone

Vital statistics on the picture would include mention of innumerable minor wounds suffered by the animal attendants For Charles Oelze who was in charge of their keeping the score was eleven trips to the doctor with bites and one trip due to the slap of a tail which left a mark like that of a saw, and felt, as Oelze described it, like being hit with a whip" Returning good for evil he managed to keep them all alive and well, including one variety of lizard which the San Diego Zoo could not supply because they "could not keep them alive"

Charley consoles himself for his many bites by being grateful that he was never

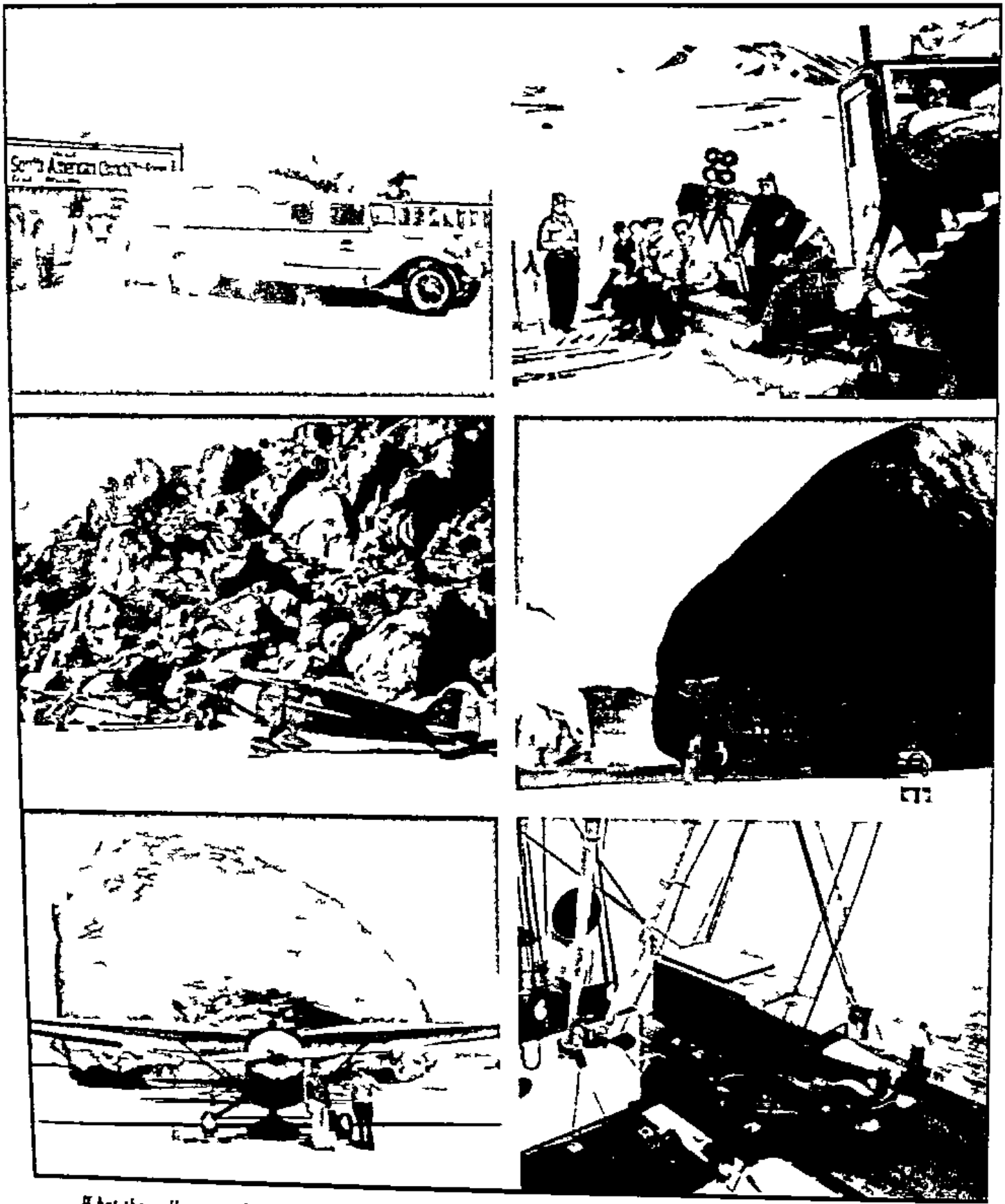
(Continued on page 20)



The author who also is Technical Editor of "International Photographer"



Recreat ng prel storic cond t ons an l a nal l fe for the Hal Roach product on 1 000 000 B C as an ass g ment that taxed the ingenu ty of camera cre s but it was real st cally and successfully accompl shed as ind cate l by these an a ng scenes t l ich are a comb nat on of scale m n at re and product on sl ots as described t tl e accompanying art cle



What the well equipped cameraman is using in his business is demonstrated to the Nth degree by Jerry Fairbank with his array of transportation units that whisk him and his cameras to wherever he can find material for the "Popular Science" and "Unusual Occupations" shorts he turns out for Paramount. The truck houses a generator

going a long way for shorts

★ **Popular short features that take only a few minutes screen time involve detailed preparation and use of surprising array of equipment in production, as done by Jerry Fairbanks, photographer and co producer, scientist, aviator, etc**

CAMERAS and lenses are the basic equipment for most cameramen but Jerry Fairbanks considers an airplane and special truck equally important for his work At any time now he may add a yacht or submarine so that he can handle any shot on land sea or in the air

Versatility is a keynote of Fairbanks career in the motion picture field He brought the first full length X ray pictures of a human body in color to the screen He shot two of the greatest imaginable extremes in delicate jobs—that of the intrepid oilfield worker who handles treacherous nitroglycerine and in a vastly different field that of the famed surgeon who has specialized in removing objects from the human chest cavity Using X ray and fluoroscopic lights he showed every detail of the process in utilizing a bronchoscope to remove an opened safety pin from the dangerous position where it had lodged in the body of a young woman

In fact there is hardly a branch of human endeavor nature industry or science that Fairbanks has not photographed —if it is unusual in its field

Millions of movie fans have seen his work in either the Unusual Occupations or the Popular Science short features he has made for Paramount In addition to being responsible for the photography of these specialties he is co producer of them with Robert Carlisle Last October he made a tieup with *Liberty* magazine to produce shorts adapted from the magazine's short short stories They are also for Paramount release under the general title of Bits of Life

One reason for Fairbanks success is his intense research technique A student at heart he has an extensive library to aid him in building up outstanding features His Cinecolor shorts on unusual occupations have earned him a world wide reputation

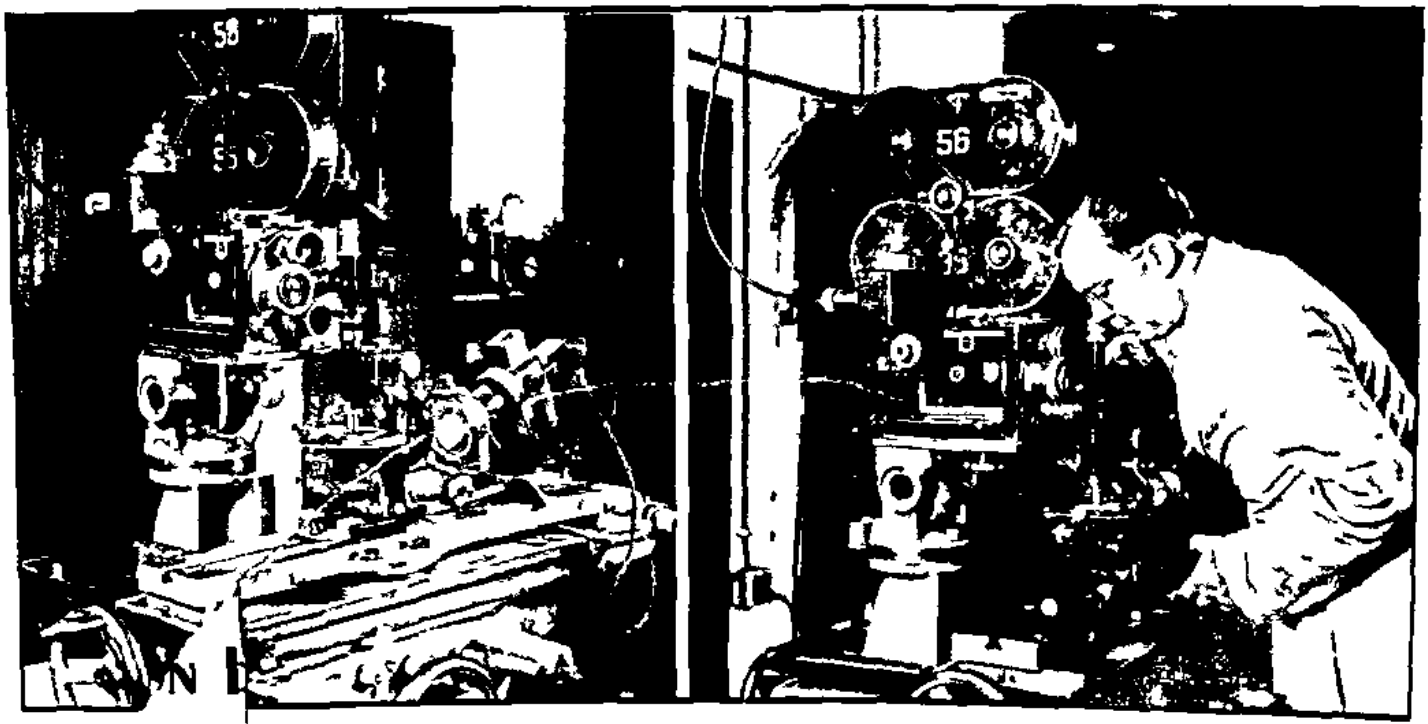
Because of his educational background he has received the cooperation of many important universities in the technical research he conducts He is credited with being the first photographer to adapt color to photomicrography Through the camera's eye he has brought the mysteries of life from the scientist's laboratories onto the screens of the world so that they might be visualized and understood by the layman His work has been exhibited before the American Medical Association indicating the high regard in professional circles for his skill and discrimination

Going from the ridiculous to the sublime, Fairbanks is responsible also for the screwball non science that emanates from the laboratory of the Wily Wizard of Waukesha known to screen audiences as Professor Oakes

His stuff has earned popular as well as critical approval over a long period of years Exhibitors and reviewers rate his short features consistently high Picture editors of newspapers and magazines also appreciate his efforts as indicated by the many times they use stills from one of his Popular Science or "Unusual Occupation features for layouts in their publications

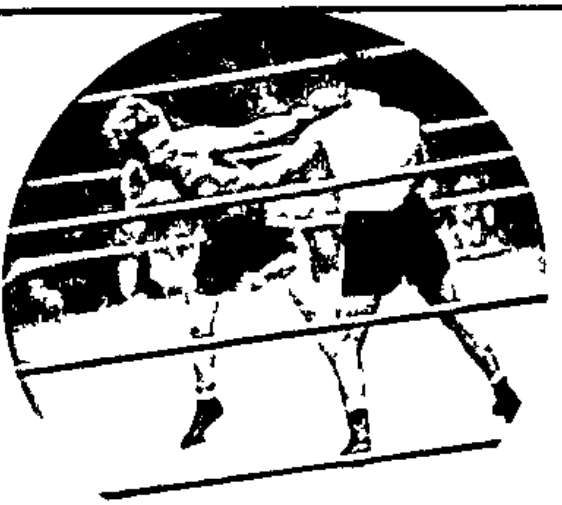
With this varied and successful background what does Fairbanks have to say about learning photographic technique? His opinion is that the cameraman learns only from actual experience under the varying conditions that arise with each assignment As he states it There are no

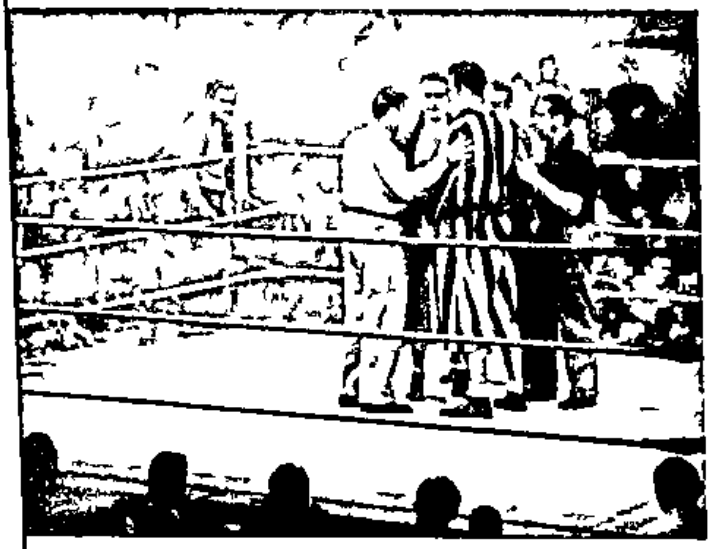
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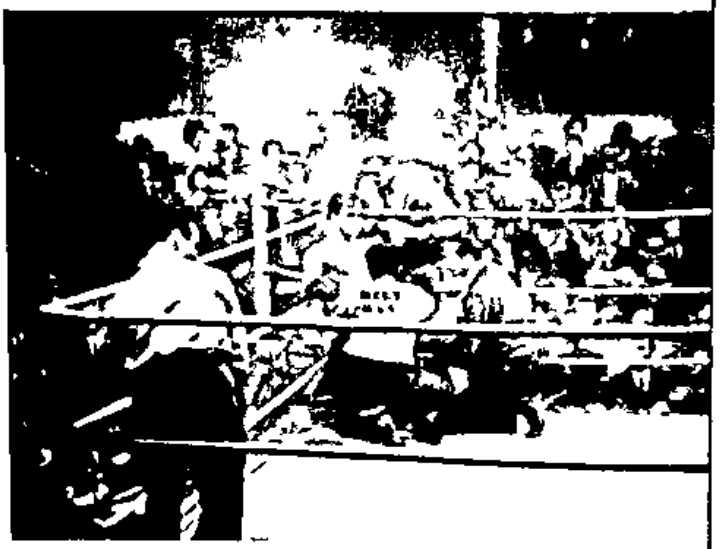


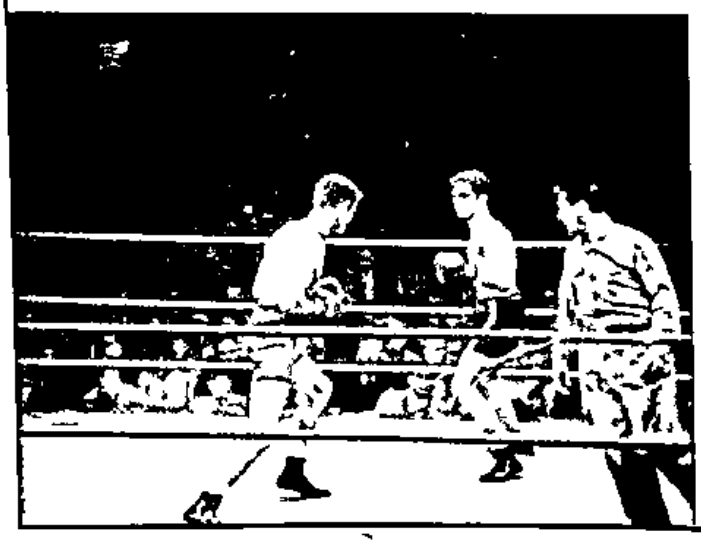
...ghting equipment and also serves as dark ... is designed for use as a shooting base ...un plane When not on location in difficult or picturesque places as shown by the layout on the facing page he applies his talents to such scientific pursuits as photomicrography (above)

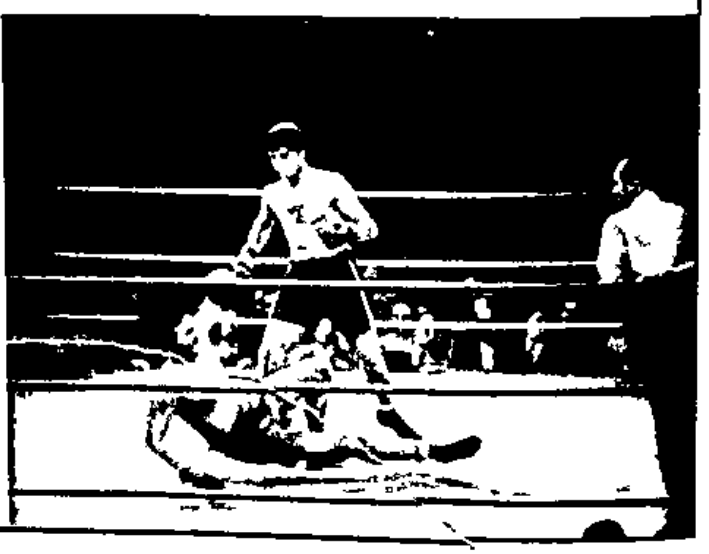


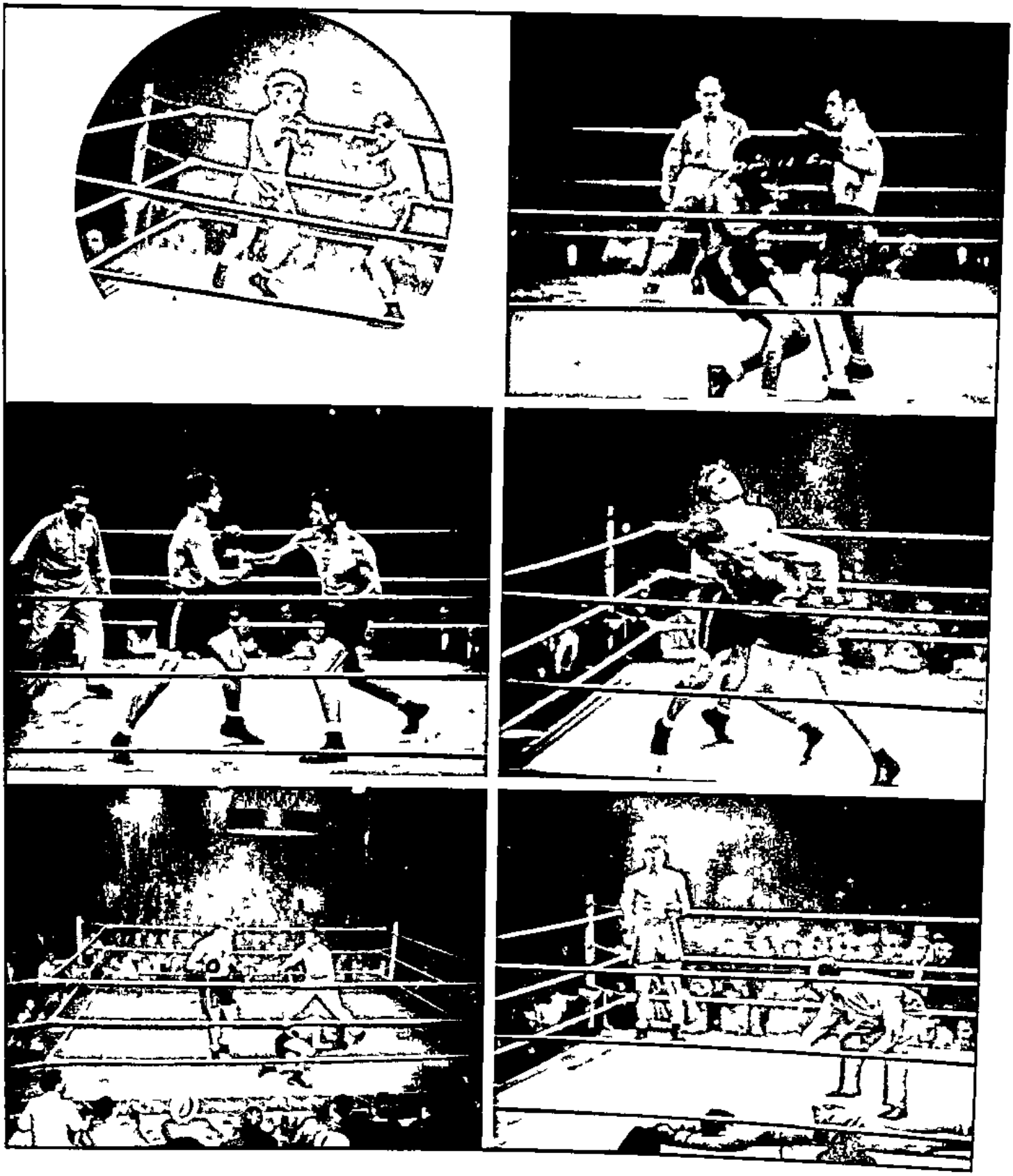












Action by Koffman

Super sensitive film finally has made the job of shooting fast paced fight scenes comparatively easy it was revealed in Hollywood this month as Paramount Studio completed a difficult publicity still job

Super XX panchromatic still film was used for the first time to cover a fight picture as production of 'Golden Gloves' was started with a cast headed by Richard Denning Jean Cagney, J Carrol Naish Robert Paige and William Frawley

(Continued on page 13)



GEORGE RAFT

ELMER FRYER PHOTO

how the picture was made

By ELMER FRYER

SINCE a portrait should reveal the man as well as his likeness I tried to catch the brooding quality and the intensity which seem to me to be characteristic of George Raft I didn t want the picture to be static as a likeness That made it necessary for him to do something—smoke a cigarette in this case

In attempting to achieve a natural portrait, I found it necessary to use three baby kegs and one equipped with focospot attachment The combination of three lights blended together to produce a third dimensional effect and to help me catch the rich texture of Raft's suit

A high source light was used for the Raft portrait The light was a baby keg with focospot, which I felt was necessary to keep the light on Raft's face and coat and to keep it off his hand If the hand had been overlighted, it could become a disturbing factor

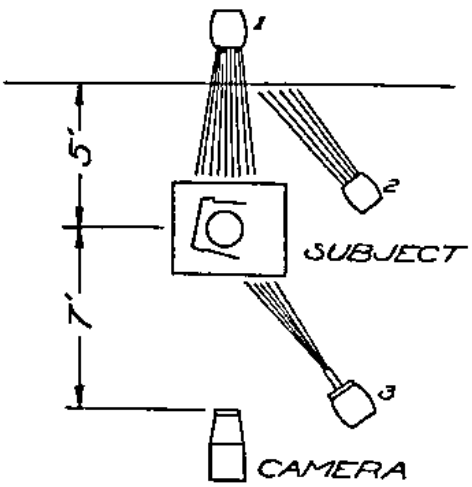
A baby keg was used as a back light It served to maintain a separation between the background and Raft's hair The dark background was imperative if I hoped to pick up the smoke from his cigarette

One light was directed at the background and pulled down to Number 4 spot

No diffusers were used on the lights

Lights that offer the photographer the advantages of control and direction without any light leakage also make it possible for him to retain the character of his subject, while achieving the desirable effects of third dimension The fullness of the illumination permits him, furthermore, to enjoy the advantages of full depth

In the case of this Raft portrait, it was especially useful to have a "controllable" spot handy because of his extremely dark hair, which soaks up light under ordinary conditions of illumination I had the light power to reproduce the natural appearance of his hair and the control to avoid burning up other details of the picture



LIGHTING DIAGRAM DETAILS

LIGHT NO 1 Coming down over background striking left side and hand on chair Focused at No 2

LIGHT NO 2 Directed against background, five feet high focused at No 4 and lighting upper right hand corner of portrait

LIGHT NO 3 Equipped with focal spot attachment eight feet high and four feet to right of subject, focused at No 3 lighting face and right shoulder

SUBJECT was on platform about 12 inches high Camera was lowered to three and one half feet from floor

STOP Between F 8 and F 11

A Note On Fryer

● For eighteen years, at various studios Elmer Fryer, portrait photographer extraordinary, has been watching a procession of lovely movie stars pass before his lenses

'There have been many, many hundreds of them," he says, "so when you ask me to name the 'ten most beautiful' among them all, you're requesting the impossible But I will try to select ten among what might be called the current crop of stars

Right here on our own lot (the interview was in Fryer's gallery at Warner Brothers), I'd choose Jane Wyman as a splendid subject of the vivacious, healthy animated type Her hair and eyes are gorgeous and her features perfect for photography

"Of the brunette type I'd name Brenda Marshall among our own players—the regal looking raven haired Brenda with the deep brown eyes that look almost black in her portraits She radiates an atmosphere of poise, balance, complete control of herself and any situation in which she may be placed She's a delight to the camera

"Now let's take a redhead from another studio My first choice along this line is Myrna Loy It's true that Myrna is freckled (though the little spots of pigment don't show in her pictures under her make up), and her nose is slightly retrousse, but nonetheless to my eye she is altogether lovely

"Among the youngsters that I photograph frequently around here is Olivia DeHavilland the dark haired, dark eyed youngster whose forthright beauty is no problem for the photographer Every angle of her face is good

"No portrait photographer would skip Ann Sheridan in a list of the sort we're making now She is probably the best subject for the camera that Hollywood knows. Not only because of her vibrant beauty, her graceful figure, and her natural charm but because every pose she assumes is a bit of classic art

"Ginger Rogers is one of my pet subjects, though not everyone would agree as to her beauty To me her beauty is in her lively personality and her easy grace

'Let s see That s seven I ll name three more without hesitation—Carole Lombard Joan Crawford and Loretta Young Perhaps Joan is not of the standardized type of beauty with absolutely perfect features but that sort of beauty is not the sort that appeals to me or to other experienced portrait photographers To me she is lovely, and so likewise are Carole and Loretta"

Fryer is a member of Local 659, IATSE

(Continued from page 11)

Photographer Jack Koffman, working under Harry Cottrell, Paramount still department head was assigned to the picture based on the famed amateur boxing tournaments Using a Speed Graphic camera with Bausch & Lomb Tessar 3 5 lens with a 5½ inch focal length he got finished pictures which show unusual clarity, depth and precision timing

The assignment was difficult because of the 50 foot distance between elevated camera platform and the fight ring in the studio s huge A" stage No flashes were possible because of this distance, and proximity of the motion picture cameras

Also heavy tobacco smoke coming from stogies of 500 odd spectators in the arena and night effects further hampered the photographer

Despite these obstacles Koffman's camera with the speed of 100th part of a second caught fast blows and mid air falls of Richard Denning and Robert Ryan four time Dartmouth heavyweight champion, who battle in the main event

Availability of the Super XX film has made easy the photographing of swift action scenes under conditions which heretofore would have presented extreme difficulties The super sensitive film was ready for cinema cameras 18 months ago and only recently in cut film sizes

The pictures were taken during actual filming by a battery of three cameras under the supervision of Cinemaphotographer Henry Sharp Edward Dmytryk directed the picture, which is set for release in August

The stills will be distributed in an unusual tie up with 100 newspapers which sponsor Golden Gloves fights The shots are far superior to the results usually obtained by newspaper photographers in covering sporting events of this nature

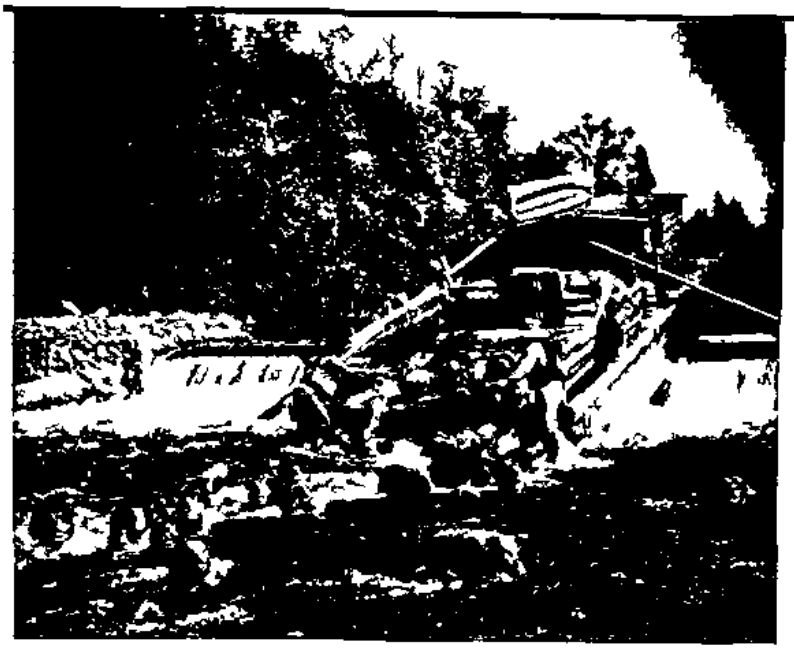








STILLS BY ALEX KAHLE FROM RKO RADIO S













LINCOLN IN ILLINOIS" STARRING RAYMOND MASSEY

wizard of miniatures

★ A story about the "little man who *was* there" for the shooting of difficult miniatures for "1,000 000 B C." and for hundreds of other productions—Frank William Young who knows the answers to most all questions involving the photographic industry.

Since 1 000 000 B C." is temporarily in the spotlight it would seem like an opportune time to introduce to those of you readers who have never had the pleasure of personally knowing him the man upon whose shoulders fell the principle burden of its making — Frank William Young member of Local 659 IATSE

If you have never met Frank it is not because there has not been ample time to do so for as early as 1913 he was shooting Harry Pollard and Margaret Fisher and he has been in the business ever since Up to the present writing he has somewhere in the neighborhood of 300 productions to which he can refer as past experience His case is reminiscent of a letter of reference an early lab man once wrote for a friend He has experienced all the trouble with film it is possible to have

You have heard of the old time photographer who made his own emulsions etc Frank is one of those Born in Virginia City Nevada, he could see no future in wading knee deep in water in a gassy mine shaft and soon broke away to become a roving photographer and what have you His experiences are legion and despite a rather limited repertoire of gestures he does a hilarious job of telling them

He is affectionately known on his home lot as Cold spot," Frigid or any other expression referring to a sub zero condition The title is two fold in its application If there is the slightest excuse for being cold Frank is freezing Like hypo he maintains himself below room temperature To further merit the name he recently attempted to work out a cooling system for stereopticon and the device was so effective it froze the water as well as Prestone and a number of other non freeze preparations The coldness is strictly physical however as Frank is a friendly soul liked by all who know him

In addition to his photographic knowledge he is an artist, electrician machinist chemist and general consultant He is small in stature—about the height of a good set of encyclopedias — and his head holds about the same amount of knowledge You need not hesitate to ask any question of Frank If he cannot answer it he knows where he put the article that did answer it He has a ravenous appetite for facts and an extremely retentive memory

On 1 000 000 B C" he shot 130 000 trying feet of miniature In addition to working in cramped quarters with high camera speeds he was constantly fighting shadows of fingers and hands As nothing seemed to tempt the reptiles used in the picture like a nice juicy finger they were consequently inveigled into most of their action by this bait



Frank William Young— He makes things look too easy

An orderly chronology of Frank's motion picture experience would pick up San Diego about 1913 where he had a commercial photographic studio and was experimenting with bi pack color photography Patents taken out and acquired at that time were later sold to the Multi Color Corporation An attempt to work out a multiple emulsion on a single film met with so much resistance from the film manufacturers that he dropped it Had he acquired this patent it would control the color field today

At the outbreak of the war a local acetate plant was having difficulty finding a suitable lining for their tanks Frank solved the problem for them and the army immediately decided they could use such a man in a plant manufacturing chemical munitions at Edgemar New Jersey But Frank being a peace loving man had different ideas It was explained to him that this was the army that a state of war existed and that he could be drafted for such work Frank countered with the explanation that

(Continued on page 26)



A starting demonstration of tricky camera effects is unfolded in Dr Cyclops when five human beings find themselves reduced to one-fifth their normal size as the result of a weird experiment by a mad scientist portrayed by Albert Dekker Photos above are by Malcolm Bulloch member of Local 659, IATSE

FANTASTIC DR. CYCLOPS

It isn't often that all Hollywood gets excited about one of its own products Customarily a picture is just a picture to be evaluated at its entertainment worth the performance of its principals the capability of its director producer, cameraman etc But every now and then a film comes along that has the whole industry excited

Most of the stories that excite interest are well known novels or have outstanding casts "Dr Cyclops lays no claim to either of these But it undoubtedly is one of the most amazing pictures to be made since King Kong And the same man made both

Ernest Schoedsack the director delights in creating spectacles and illusions that other people tell him are impossible

Dr Cyclops deals with the fantastic theme of a mad scientist who evolves a method of reducing normal humans to one fifth their size It all takes place in the jungles of the upper Amazon a locale designed to add excitement and adventure to the tale

The picture was made in deep secrecy Officers were stationed at the stage doors daily No one was permitted to enter who was not actually engaged in production Not only is the picture unique but the varied use of Technicolor including some extremely tricky work by Cameraman Henry Sharp member of Local 659 IATSE might revolutionize the business

Albert Dekker has the title role in the film He is an experienced stage actor with Theatre Guild and other triumphs but has had scant screen experience For the remaining parts producer Dale Van Every selected comparative unknowns

'This was done purposely Van Every explains Our cast is competent even if none of them are yet well known Our reason is this it naturally will be difficult to make the audience believe that our characters have been reduced to a point where they are only 12 or 14 inches high would be impossible to make an audience believe it for example if we had Fred MacMurray and Barbara Stanwyck in the boy and girl roles The public knows them too well So we deliberately chose players not too well known

NOTICE TO AMATEURS!

Do you ever wonder when you see effects in pictures how these effects are achieved? Would you like INTERNATIONAL PHOTOGRAPHER to open a department that would answer your inquiries?

For example suppose you had seen the picture Dr Cyclops from which the two photographs above were taken Suppose you were curious about it and wrote in to learn how it was done If the studio was willing to tell we would have one of their technicians answer your questions If not, we would have a staff technician make a guess as was done in this instance

He would say off hand that the picture on the left had been shot with projection process That is to say the little people instead of actually being in the set are really a picture of the people projected against a small transparency screen

He would have to guess harder on the right hand picture however and after a great deal of meditation he might conclude that the picture of Dr Cyclops had been shot straight and that the picture of the little man had been shot with the object far enough from the camera to reduce the figure to the desired size and probably shot against a medium such as black velvet He would then say that the two scenes had been projected against an animating table and complimentary printing mattes made to block out the palm of the hand in the area where we see the little man and the little man where we see the big man's fingers and that they were then superimposed

Of course the technician might be wrong as there are many ways of doing this sort of thing but if you amateurs are curious and would like to have such a department let us know by sending in your questions on unusual photographic effects you may see in motion picture or still shots

—*Ed Note*

NEWS OF THE MONTH

Color Photography Classes

● Classes in beginning and advanced Natural Color Photography now are being conducted by the Hollywood Center for Adult Education under the direction of Stuart C Barsby who extends a special invitation to members of Local 659 IATSE, to investigate the course

All phases of theory and practice from the exposing of the negative to the finishing of the color print are to be presented Popularity of the course is indicated by the 700 applications received many of which must be automatically denied because of the requirement that all applicants must have at least five years experience in black and white photography and must be actively engaged in the industry at this time

Instructor Barsby who is a former member of Local 659 IATSE and is now a member of Local 695 is widely known for his research in color He was at MGM for many years working in color and sound Previously he was on the staff of the Thomas A Edison research organization for eight years

Enrolled in the classes are many prominent members of the film industry including the following from IA locals newsreelmen Sanford E Greenwald and Frank M Blackwell News of the Day Dexter Alley Universal Herb Tice Ralph B Whitehouse W S Hardy James Ridge and E Chris Gutierrez Movietone News

From Local 659—M B Paul Columbia Pictures Ernest Bachrach RKO Ray Ries Guy Wilky Hatto Tappenbeck Stack Graves and Richard Worsfold MGM From Local 683—Art Say RKO Raymond M Werner Warner Bros Robert Randall MGM Lucretia Donati Hal Roach From Local 728, H C Craig Warner Bros and Local 44—Reggy Smith

Reader interest and widespread circulation of INTERNATIONAL PHOTOGRAPHER is indicated Barsby said in the fact that one of his students first read about the course in the October 1939 issue of the magazine, while in London Upon his return to the U S he came to Hollywood and arranged to enter the current class Another classmember came here from Chicago to attend after reading the previous notice in INTERNATIONAL PHOTOGRAPHER.

Beginners classes meet Monday and Wednesday nights advanced classes Tuesday and Thursday nights Hours are 7 00 to 10 00 p m Except for a $3 laboratory fee there is no charge for attendance

In addition to lectures and demonstrations in the classes home work is assigned and negatives returned as a result are carefully analyzed and discussed particularly for gamma which Barsby says is a key to good results in color photography

Cameras used in class are of the one-shot type, Curtis Devin and the Barsby makes being used Every type of color print reproduction from the Carbro and Eastman wash off relief to the newer and less familiar techniques including Chromotone Belltone and the photogelatine method is to be covered

The Hollywood Center for Adult Education meets at Hollywood High School 1521 North Highland Avenue Herman C. Jay is principal



Thomas S Curtis designer of the Curtis color camera poses for an INTERNATIONAL PHOTOGRAPHER *photo with Stuart C Barsby, instructor of the natural color photography classes being given at the Hollywood Center for Adult Education*

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New Editorial Assistants

● Continuing the long established policy of INTERNATIONAL PHOTOGRAPHER to present its readers with fresh editorial features and authentic photofacts from outstanding authorities in the profession the following new appointments have been made to the publication staff

ROMAN FREULICH *Contributing Editor*
ERNEST BACHRACH *Literary Editor*
ALVIN WYCKOFF *Amateur Section*
WILLIAM V DRAPER *Technical Editor* and conductor of the Question and Answer Box for amateurs

A Famous Agfa Twosome



STAR 1 AGFA SUPREME

A great film under normal production conditions Combines speed with fine grain improved color balance and gradation



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A superb film under difficult lighting conditions Noted for its amazing speed

Agfa Ansco Products. Made in Binghamton, New York, U. S. A.

AGFA RAW FILM CORPORATION

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NEW YORK
245 West 55th Street
Tel Circle 7-4635

"1,000,000 B.C."

(Continued from page 6)

bitten by one of the lizards which clamped down on a rubber feeding hose and resisted all efforts to remove it for a period of ten minutes. An interesting angle lay in his various reports to the doctor. Each time he would report and he sometimes reported several times a day with new bites, he would explain that his bites were from such weird sounding creatures from such remote places that the doctor could not decide whether Charley was crazy or just giving him "the business."

Technically the problem was one of combining scale miniature with production shots.

The miniature crew headed by Roy Seawright consisted by Frank William Young who photographed all the miniatures, Fred Knoth and crew who built them under the art direction of Danny Hall. Jack Shaw on matte shots and as previously stated Charley Oelze on the animals. The direction was by Hal Roach Jr., who incidentally conceived of the story.

The most unusual effect used in the picture was Miniature Foreground Projection using a process invented by Louis Tolhurst on which he has applied for patents. It could best be described as a background projection process without the use of a transparency screen. By an ingenious system of lenses he achieves a sharp focus on two or more planes, one of which is the projected image. Technical men will wonder at the results thus achieved.

"1,000,000 B.C." will in the consensus of all who were intimately connected with its production prove a breath taking pulse quickening spectacle to movie goers both adults and children. But few who see it will appreciate the problems which confronted the technical experts. Such pictures happen along just once in a while.

Letter to Editor

Sirs:

I have just read your article in the February issue of INTERNATIONAL PHOTOGRAPHER "New High Speed Sheet Film" and note that you wish comments upon the advisability of including similar articles in the magazine.

When I used my first Tri-X Pan film some four months ago I was unable to procure such information as you include in your article from the Eastman Kodak Company. I therefore was obliged to devise my own method of handling this new and extremely high speed emulsion.

I have had wonderful success with Tri-X pan from the first but I would certainly have felt more confident had I been able to have studied a technical treatise of this emulsion before I made my initial exposures.

I feel that a technical acquaintance with new products and machinery of our trade is most essential *before* we are required to use them in production work. As I have illustrated above this is not always procurable even from the manufacturers themselves.

Therefore I believe that our magazine will render a service of value to a host of readers by including whenever possible a complete technical resume of new films, cameras, lights etc., in its pages at or about the time such products are placed in the hands of our members for studio use.

Sincerely,

IRA B. HOKE

Hollywood

Kodachrome Film Cleaner

● Bell & Howell calls attention to the fact that Filmoleen cleaning fluid is recommended for Kodachrome film as well as for black and white. While Filmoleen, along with other cleaners, will remove the slight surplus of dye from the surface of the color film, giving the cleaning fabric a yellowish tinge, the colors of the film are said to be in no way affected. It is stated that after the first tinge of color is removed subsequent cleanings with Filmoleen have no further effect in this respect.

Bell & Howell reports that in thoroughly testing the cleaner in their engineering laboratory a Filmoleen-cleaned loop of Kodachrome film was projected nearly 500 times with no effect whatsoever on the color.

ABOUT MR. FAIRBANKS

(Continued from page 9)

two shots exactly alike consequently it is not possible to learn from textbook or school what angles, composition and exposure to use. A book cannot tell you whether to use a 21mm lens or one of another focal length."

The only cameraman to use his own plane in producing pictures he is well known in aviation circles belonging to the Aviation Country Club and the exclusive Q.B. fraternity.

With his plane constantly in readiness he can hop to Cuba, Mexico City, Canada, New York and to all other points north, south, or east on a moment's notice wherever there is a subject suitable for his unique productions. Since his headquarters are Hollywood, he can hardly go West unless he hops the Pacific, which he may do sometime at that.

Fairbanks went to school at San Antonio, Texas and at the University of Arizona. He first took a job as a projectionist, affiliating with Local 150, IATSE, then decided to get into the camera end of the business, signing up with Local 659, IATSE. He has worked as second and first cameraman during his twenty years experience, during which time he has covered territory as have few others in the motion picture or any other field.

Motion Picture Equipment

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TRADEWINDS

Two New Kodaguides

● Two new Kodaguides of definite practical value for the professional and commercial photographer and the advanced amateur are announced from Rochester

One, the Eastman Film Kodaguide provides extensive and valuable data on all Eastman Sheet Films miniature films and roll and pack films in general use Data include identification of film type color sensitivity Kodak speeds Weston and General Electric meter settings both daylight and tungsten a notching code chart a chart showing the monochrome rendering of colors by each film type under tungsten light and daylight and tungsten factors for eight commonly used filters (K 1, K 2, X 1 G A F B and C-5) when used with each film type In addition spectograms of all film types and spectral transmissions of all filters are charted in full color—and all this material is presented on a single handy Kodapak laminated pocket size card 3 x 4½ inches!

The other guide known as the Effective Lens Aperture Kodaguide will be of material use to photographers in all branches of copying and small object photography when lenses are used at other than normal extensions Covering all lenses from 25mm to 30-inches focal length, and lens to film distances from 1 to 64 inches this Kodaguide will be of value both in still photography and in motion picture work where extension tubes are employed One dial setting for a known lens to film extension immediately indicates the effective values of the f/numbers at that degree of extension and also gives the correct factor for increasing or decreasing shutter time at an indicated f/number setting to obtain normal exposure

The new Kodaguides each retailing at 10 cents, supplement a list of eleven now in regular use by amateur or professional photographers Other Kodaguides are The Kodak Outdoor Exposure Guide the Kodak Indoor Exposure Guide for Kodak Roll Films and Film Packs the Kodak Outdoor Guide for Plus X Panatomic X and Super XX (35mm and Bantam) the Kodak Indoor Guide for Plus X Panatomic X and Super XX (35mm and Bantam) the Cine-Kodak Outdoor Exposure Guide Cine Kodak Indoor Exposure Guide Kodak Home Lighting Guide (for photography by regular home service bulbs) the Kodak Outdoor Filter Guide Wratten Filter Guide Kodak Developing Guide (for Kodalk Fine Grain Developer DK 20) and "How To Expose Kodachrome a pocket sized durably bound 50-cent booklet with calculators for 35mm Bantam and motion picture exposures by daylight or tungsten lighting

For Efficiency Analysis

● With time and motion study becoming of increasing importance to the industrialist and with motion pictures assuming a major role in this study of operations and methods Bell & Howell announces that it is prepared to equip with special micro motion speed dials any of its Filmo 70 16mm Cameras or Filmo 8mm Cameras operating in the 16-to-64 speed range

Motion study experts use the metric system with the minute as the unit of time Therefore Bell & Howell cameras equipped for this work have micro motion speed dials calibrated to operate the instruments at 500 1000 2000 3000 and 4000 frames per minute instead of the conventional "per second" calibrations Two types of dials are available—one graduated exclusively for micro-motion work and the other calibrated both for these special speed and for conventional camera speeds

In analyzing micro motion pictures each frame is viewed as a still and it is necessary to determine accurately the number of frames in each analytical sequence Therefore there must be some convenient method of moving the film through the projector one frame at a time Although this is easily accomplished on standard Filmo projectors simply by turning the hand setting knob Bell & Howell is providing a special frame counter and hand crank which may be attached to any 8 or 16mm silent Filmo projector It is instantly disengaged for regular projection

To illustrate if a factory operation were filmed at 1000 frames per minute and if the projector operator cranked through 100 frames to complete the operation on the screen it is obvious that the operation required 1 10 of a minute to perform That is the information the time and motion study expert wants

Pre Tested Amplifier Tubes

● From Bell & Howell comes word that in the future all tubes supplied by the company for Filmosound Projectors will be pre tested and identified by the B&H shield

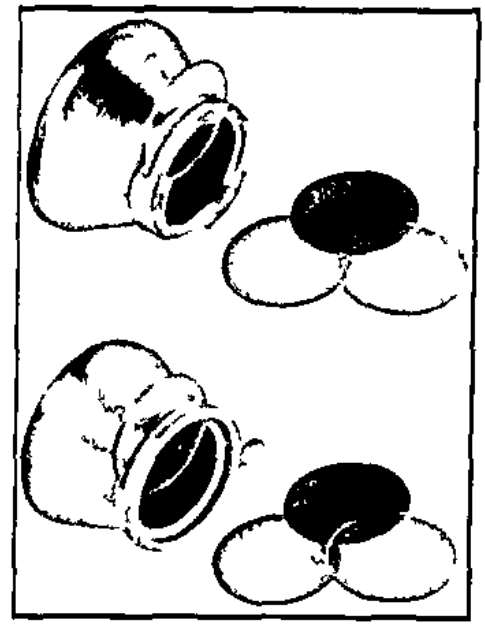
Tubes will be tested under actual operating conditions in the same type of Filmo sound as that in which they will be used and the tubes meeting the rigid performance requirements will bear the B&H shield marked indelibly on the sheath Bell & Howell claims that these tests will assure perfect performance and long trouble free tube life

Despite the special handling involved and the high degree of selectivity thus achieved there will be no increase in price

Lens Shade—Filter Set

● Reduction of light reflection to an absolute minimum and complete instructions covering filter factors for five filters in either day or artificial light along with information on the types of film (orthochromatic or panchromatic) with which they are used are features of the Para sunshade and filter set

The base is arranged on a revolving lens flange slotted to permit the immediate insertion or removal of filters A half turn of the lens shade opens or closes the slot



Designed to slip over the regular camera lens two types of mounting are available —one having a set screw the other with six spring tension points which grip the lens barrel This latter type is for lenses on which the front element is helically mounted for focusing

The set is complete with five color fused optically flat glass filters — light yellow medium yellow orange green and red It is chrome plated popularly priced and made in the U S A

The 37mm size is immediately available with all the standard sizes scheduled to follow according to Burke and James 223 225 W Madison Street Chicago Ill

1940 Graflex Catalog

● An attractive and useful photographic catalog of 32 pages has been issued by Graflex for 1940 their Golden Anniversary year

Full color cover illustrations from Kodachromes made in Graflex and Speed Graphic cameras outstanding black and white pictures helpful information on photography and condensations from Morgan and Lester's new *Graphic Graflex Photography* in addition to complete descriptions and pictures of the various Graflex and Speed Graphic cameras and their accessories make it a valuable reference book

UNRIVALED PERFORMANCE

NO wonder cameramen place full confidence in Eastman's three negative films. They know that each offers specialized ability to meet modern production demands. Even more important, they know that every foot will have the same high quality, the same unvarying dependability. Eastman Kodak Co., Rochester, N.Y. (J. E. Brulatour, Inc., Distributors, Fort Lee, Chicago, Hollywood.)

PLUS-X
for general studio use

SUPER-XX
for all difficult shots

BACKGROUND-X
for backgrounds and general exterior work

EASTMAN NEGATIVE FILMS

BOOKS

$3 00, U S Camera, 1940 Edited by T J Maloney, Printed by John P Smith, Inc Papers by S D Warren Co Engravings by Warren Engraving Co Inks by International Printing Ink Corporation Foreword by Edward Steichen and Tom Maloney A short summary of 100 years of American Standard of Photography by Elizabeth McCausland The judging again this year as last—by Edward Steichen

After all this fanfare, we now get into the pages of a pretentiously gotten together photo annual My impressions were varied, so, rather than give you an individual opinion, I proceeded to make the rounds From several well known pictorialists and men in our own profession I got, strangely, a similarity of expression—corresponding somewhat with my own

Firstly, that it was a marvelous research book for illustrators and the like Second, that pictorially most of the efforts leaned toward pattern or design Brutally frank record shots, with no pictorial value whatever, predominate the book Third, that the modern "isms" are gradually supplanting carefully composed and executed pictures, as one found usually in annuals of the past Fourth, with the exception of four or five, the color section is very mediocre The tendency to shoot color because there is color, still seems to be the practice Fifth, that lens and lab craftsmanship is strangely lacking, and that a wild usage of filters and tricks were very evident

The volume is broken down in approximately ten sections such as News, Negroes, Color, Pattern, Animals Mites and Madonnas, the Air, etc Intermingled with each of these are some swell down in the gutter shots—if you like them The bulk of the work seems to have been done by the hand camera enthusiast The stand camera efforts do not seem to have the swiftness of feeling but they punch harder and with surety All in all, you have some three hundred pictures to view by some of the most accepted names in the profession

Once more, because of its attempt to be documentary, its photographic value is overshadowed A very valuable book to have for its research and reference value

ERNEST A BACHRACH

B & H Film Library Catalog

● Literally a 'blue book' of film information the 1940 edition of the Filmosound Library Catalog is now available, opportunely coming just at the height of the film booking season Bell & Howell announces that the new, 92 page film book is 28 pages larger than last year's catalog that it lists 100 more films and that it is more helpful than ever as a guide to the selection and evaluation of film programs

Geared to meet the most diversified demands of educator, industrialist, home, church and community, the Filmosound Library offers carefully selected films on a vast variety of subjects, and the new edition of the catalog covers them all

Hollywood features, nature subjects comedies, newsreels, films on history travel, industry, religion, adventure, music, sport teacher training—all are fully described some in minute detail so that the customer may know in advance as much as possible about the film he orders There are, for example nearly 150 films on general and biological science, 281 full length feature pictures, more than 300 reels on travel and adventure, etc Rental prices are given, and the audience suitability of each picture is indicated, as well

Of interest to the visual educator is a feature new to this edition Many films listed in the catalog have been evaluated by official teaching bodies, and in such cases these ratings are also indicated The detailed classification and further breakdown of the film subjects, Bell & Howell states, makes it particularly easy for the customer to find the film he is after

The 1940 Filmosound Catalog is of standard letter size and is 'binder punched," for convenient use either in box files or in ring binder Bell & Howell will be glad to send a copy of the new film book without charge to all owners of 16mm sound projectors, upon registration in the Bell & Howell files To register it is necessary only to state the make of equipment and its purchase source For further information write to Bell & Howell Company, 1801 Larchmont Avenue Chicago Illinois

Two Way Camera Perfected

● A motion picture camera that photographs in two directions at once has been perfected by the camera department at 20th Century Fox for use in the filming of 'Earthbound"

This production co starring Warner Baxter and Andrea Leeds, calls for photographing Baxter's ghost and Miss Leeds Lynn Bari, Henry Wilcoxon and others in the same scenes The mechanics are involved, but the results are excellent Camera departments of other studios already have had representatives on the Earthbound' set watching the new two-way camera in operation, it is reported

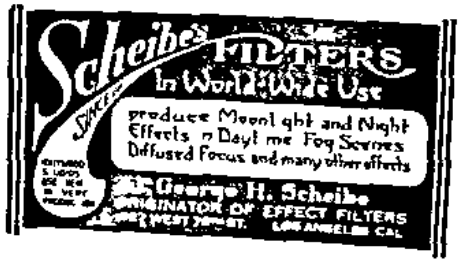
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MINIATURES

(Continued from page 16)

you could lead a horse to water but you couldn't make him wash his face You might draft me he said but how do you *go about making* me think? They compromised by accepting his cooperation in the division of aerial photography

After the war he worked at the Roach lot for about seven years as a cameraman during which period they did in the camera what today we do in the optical printer In 1927 in partnership with his brother Elmer Young one of the pioneer animators of the industry he opened the Kinex Studios and in the following four years made 48 productions with animated dolls Among the pictures made was one called 'Hamburger and his Horse Radish' In later years Jesse Lasky viewed this picture became interested in it and asked Frank what it cost Frank replied that it cost $3100 Mr Lasky was quick to correct him "You mean 31 000 But then, of course Lasky was new in the business

Called to Universal to shoot an expensive miniature of New York the first miniature in technicolor he stayed for a year and a half working in the trick department Later coming back to the Roach lot to build an optical printer and process projector he stayed on and has been shooting plates and projection shots ever since

Many of the boys in the industry have received a liberal education from Frank The writer wishes to give him credit for whatever knowledge of photographic chemistry he happens to have When he first started bombarding Frank with questions, the only chemical he knew anything about was bicarbonate of soda

While singing his praise it is only just that we should also list his faults. He has one, and it is a big one—so big that it has kept him from being one of the biggest names in the industry He makes things look too easy Knowing exactly what he wants he sets about his work in an orderly manner leaving all the acting to those who are guessing their way along and 'presto' all of a sudden he produces the desired results But how could producers ever be expected to know that they had something outstanding when it hadn't cost them a lot of money and confusion?

THREE-COLOR PHOTOGRAPHY

(Continued from page 5)

the result will be a photograph in "natural colors." The same effect could be achieved by inserting the three *black-and-white* transparencies in three magic lanterns, each lantern emitting blue, green and red light, respectively. The different densities in each slide would vary the amount of colored light transmitted, resulting in a blending of colors upon the screen in proper proportion to produce a color picture.

This represents color photography in its most rudimentary form. However, it serves to illustrate the one fundamental principle which underlies all systems of color photography today, and that is, that light *must* be separated into primary colors and then brought together again in proper combination in the finished print. The *method* of original separation and subsequent combination may differ from process to process, but the *principle* is always the same.

Now there are several obvious objections to the use of three magic lanterns to form color pictures. One is that the arrangement is cumbersome, and secondly, it is expensive. Therefore, why not bind the three lantern slides together in a single group and project them that way through only *one* magic lantern? (In which case thin films would have to be used for proper register and focus.) This, after all, seems like the logical way of doing it. However, if we tried that our results would be very disappointing—and let us see why.

It will be remembered from our study of primary colors that white light is to be considered as consisting of blue, green and red rays, and that each primary colored dye or pigment absorbed from white light the remaining two primaries. Therefore, if the lantern slide nearest the lamp in our magic lantern were red it would *not allow any blue or green light to pass* through to reach the other lantern slides. Furthermore, if the slide next to the red one were blue or green, either one would stop (or absorb) the red light and keep it from reaching the screen. The total effect of all these absorptions would be a screen practically devoid of image or color. It becomes evident therefore that in order to project images in color by *superimposing the slides themselves*, a different principle of color formation must be called into play.

When using the three magic lanterns we started with a darkened screen and secured our results by mixing colored lights. This method of forming colors by adding blue, green and red light together is called ADDITIVE SYNTHESIS.

Now let us try a different procedure. Instead of beginning with a darkened screen let us start with one already lighted with white light by one magic lantern. To get color pictures from *this* set up we must *change white light into colored light*.

White light, we know, is itself a mixture of colors, therefore if we want to change white light into colored light all we have to do is *remove* one or more of its color components. For instance, if we want to turn white light into magenta light we *must remove the green rays because the* remaining blue and red rays make magenta. This can be done with a filter which absorbs the green rays but transmits the blue and red ones. If we want to change white light into cyan light we must use a filter which removes the red rays. To transform white light into yellow light the filter must absorb blue light. Since magenta light is white light minus green light, and cyan is white light minus red light, and yellow is white light minus blue light, the colors Magenta, Cyan and Yellow are called the *Minus-Colors*. Let us see how they operate with white light coming from the single magic lantern.

To obtain magenta color light we simply place a magenta filter in the path of the white light coming from the magic lantern. If we want a yellow light we take away the magenta filter and instead place a yellow filter in the path of the white light. And follow a similar procedure for cyan. However, if we want BLUE light we have to remove *both* the *red and green* rays from white light. So we must use *two* filters, a *minus red* filter (which is cyan) and a *minus green* filter (which is magenta). To produce GREEN light we use a *minus blue* filter (yellow) and a *minus red* filter (cyan). For RED we combine *minus blue* (yellow) and *minus green* (magenta).

Another line of reasoning would be: *To produce blue we must use two filters both of which transmit blue light.* They are magenta (*blue*-red) and cyan (*blue*-green). For green the two filters which transmit green light are yellow (*green*-red) and cyan (blue-*green*). For red the filters are magenta (blue-*red*) and yellow (green-*red*).

If we want to get black we use the *three* minus-color filters together for in that case *all* the light coming from the magic lantern is completely absorbed leaving none to reach the screen. For white light we simply use *no filters at all*. But allow the white light of the magic lantern to come through pure and unadulterated.

Because we can produce color by subtracting from white light some of its color components this method of forming color is called SUBTRACTIVE SYNTHESIS.

These two separate and distinct methods of forming colors—"additive" and "subtractive" synthesis—should be kept clearly in mind. Especially the fact that they achieve the same results—but function *oppositely*. In Additive Synthesis we *begin with darkness* and "build up" our colors (including white) by adding together blue, green and red light. In Subtractive Synthesis we *begin with white light* and "break it down" into various colors (including black) by filtering it with yellow, magenta and cyan dyes, pigments or inks. (See illustration accompanying this article.)

Returning now to our three transparencies we see that in order to project them by placing *one in front of the other*, using a single light source the color of the dyes which we must use cannot be the *additive primaries* but the *subtractive primaries*.

When preparing our transparencies for additive projection (with the three magic lanterns) each blue, green and red transparency was thoroughly immersed in a dye solution so that it became completely colored throughout. Both the clear and dark spaces contained color. However, when dying transparencies yellow, magenta and cyan for *subtractive* projection (with one magic lantern) the transparencies *cannot* be colored throughout. Why this need be so will become clear when we consider that in order to produce white light in subtractive synthesis we must allow the white light of the single magic lantern to come through clear and unobstructed. Therefore if any of the transparencies were entirely colored only *colored light* could come through! This introduces the problem of putting dye on our transparencies only where we want it, and *not* having it appear where we don't want it, and, since we obtain our different colors by mixing the three subtractive primaries in *various proportions* portions of dye must be applied to each transparency only in the *amount* that we want it. Furthermore since the various colors we are to obtain (including black) will be the result of the action of dyes upon light passing *through* them the transparencies must indeed be transparent. That is they cannot contain heavy opaque silver deposits.

Summing up then, we find that for the production of color pictures by the method of subtractive synthesis three conditions must be fulfilled. (1) The transparencies must be dyed in the subtractive primary colors, (2) the dye must appear on each transparency only *where* we want it (leaving the other spaces clear) and in proportion in which it is wanted, and (3) the three transparencies must be free of heavy, opaque silver deposits.

Still another factor enters which tends to make subtractive synthesis more complex than additive synthesis. In the latter case it was no problem to know what color to apply to the transparencies the slide made from the negative exposed through the blue filter was dyed blue, the

(Continued on page 28)

one made from the green filter negative was dyed green and the one made from the red filter negative was dyed red . . But for subtractive synthesis, *which of these transparencies—made respectively from the blue, green and red record negatives—shall be dyed YELLOW, MAGENTA OR CYAN?*

The answer will be found in the fundamental difference that exists between the additive and subtractive methods of producing colors and this subject will be given a fuller treatment in a future article. For the present it will simply be stated that whereas in additive synthesis we print using the *same* colors which correspond to the light affecting the negative in subtractive synthesis we print using those colors which are *complementary* to the color of the light affecting the negative i.e. In subtractive synthesis the positive made from the blue record negative contains a yellow image, the positive made from the green record negative contains a magenta image, and the positive *made from the red record negative* contains a cyan image.[5]

We learn then that for the photographic recording of color on negative materials there is but *one* principle for the manipulation of light and that is to divide it into its fundamental primaries blue, green and red. But for the making of positive *prints* in color there are *two* principles for the manipulation of light one is the principle of Additive Synthesis, and the other is the principle of Subtractive Synthesis.

The great lengths to which practically all processes of color photography have to go in order to put these few principles into practical effect attest to Man's technical ingenuity and his untiring perseverance in order to realize an ideal.

It should be noted that "natural color" photography is in reality, "synthetic color" photography for the colors seen are the result of the use of dyes or pigments—no matter how they have been applied. In all cases we begin with a black and white image and then transform it into a colored one. The term Natural Color Photography would aptly apply to any process which satisfactorily creates the *illusion* of naturalness.

An inherent limitation imposed on all processes of photography is one of contrast. As pointed out by J. A. Ball in his address before the Society of Motion Picture Engineers:

"Even the best of reproduction procedures, even that of oil painting on canvas, *is rather severely limited when it* comes to reproducing light and shade. The contrast from whitest white to blackest black in painting is perhaps 1 to 32. Upon projection from transparencies as in motion picture work the range may be slightly greater, about 1 to 64 but in no case is the great range of sensitivity of the eye adequately reproduced. The art of painting and the art of photography, then have this in common that they seek to suggest a great range of visual contrasts by a skilful use of the more limited contrasts available in the method of reproduction."[6]

For an excellent treatment of this subject, with illustrations in color the reader is referred to D. A. Spencer's "Color Photography in Practice." New York, Pitman, 1938. This is the book mentioned by Mr. G. E. Rackett vice president and assistant general manager of the Technicolor Motion Picture Corporation in his letter which appeared in the February issue of INTERNATIONAL PHOTOGRAPHER.

[6] Ball, J. A., "The Technicolor Process of Three-Color Cinematography." J. Soc. Mot. Pic. Eng. XXV (Aug., 1935) No. 2, p. 132.

PATENTS

By ROBERT W. FULWIDER

No. 2,186,912—PROCESS OF MAKING PHOTOGRAPHS. *Otto Isterling*, Germany, assignor to Zeiss Ikon Aktiengesellschaft, Dresden, Germany. Appln. Dec. 30, 1936. In Germany Dec. 31, 1935. 3 claims.

A method of making photographs by exposing a layer of fulgides to light of one wavelength, and then exposing the layer to light of another wavelength which causes the first image to disappear.

No. 2,187,655—FILM CUTTER. *Eduard Kann*, Netherlands, assignor to N. V. Philips' Gloeilampenfabrieken, Eindhoven, *Netherlands*. *Appln. July 9, 1937.* 2 claims.

A plier like hand device for cutting motion picture film.

No. 2,183,697—METHOD OF BRIGHTENING THE COLORS IN THE SUBTRACTIVE SYNTHESIS OF COLOR PHOTOGRAPHY. *Francis G. Vanes*, N. Y., assignor of 30% to Tomas Pacanins, N. Y., and 15% to Florencio Gomez Trujillo City, Dominican Republic. Appln. July 8, 1936. 2 claims.

A color picture on an opaque white surface, with the bottom color image being an unscreened continuous tone image with at least one of the outer layers being broken into clearly separated minute areas.

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On the Cover

The Westerner adds another colorful chapter to the story of the taming of the last frontiers with popular Gary Cooper featured in a hard hitting hard riding role The cover photo by Robert W Coburn member of Local 659, IATSE was taken during filming of the Samuel Goldwyn production For further samples of Coburn s photographic skill see pages 13 14 15 16

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Art Editor, JOHN CORYDON HILL *Business Manager* HELEN BOYCE

Contributing Editors LEWIS W PHYSIOC FRED WESTERBERG D K ALLISON GEORGE HURRELL, J N A HAWKINS PAUL R CRAMER, WILLIAM COMYNS, G M HAINES Roman Freulich Ernest Bachrach, Alvin Wyckoff William V Draper

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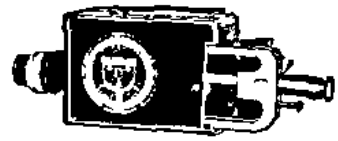
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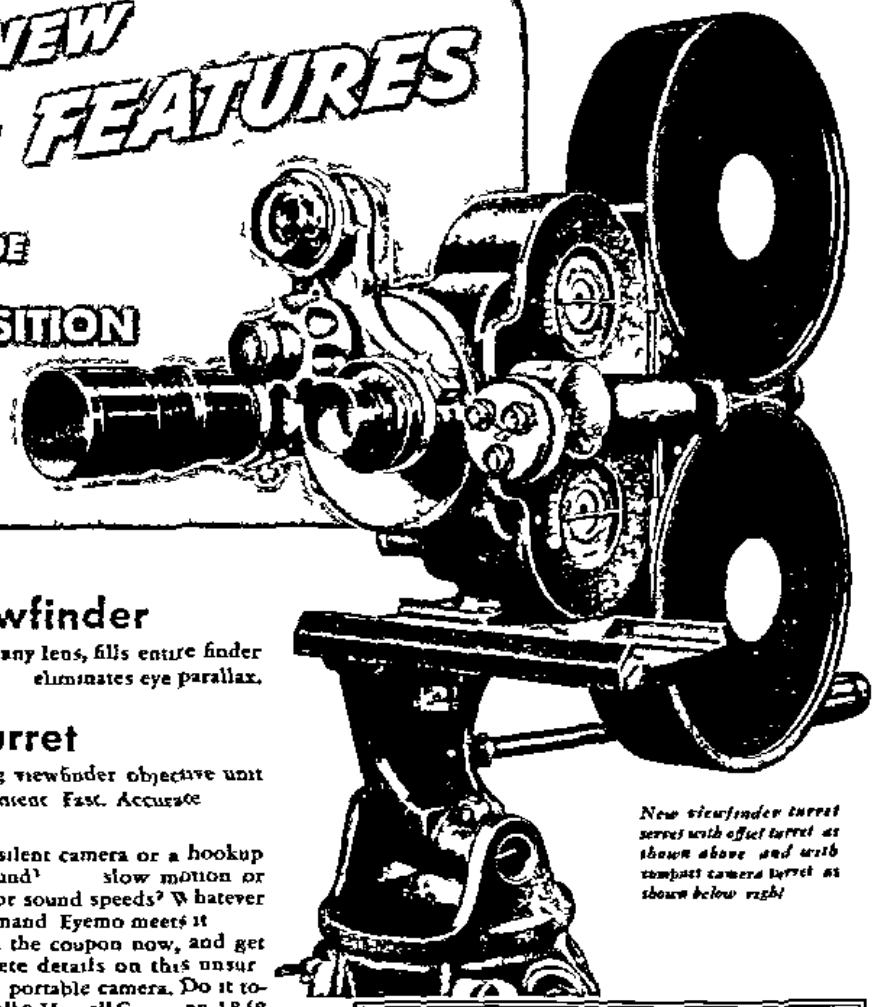
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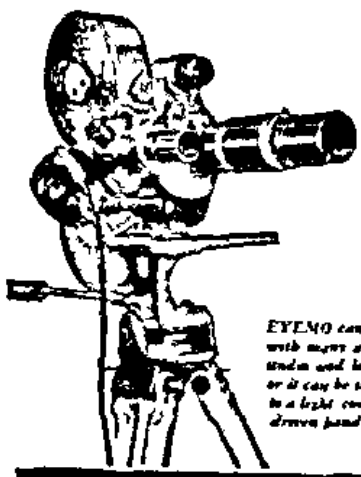
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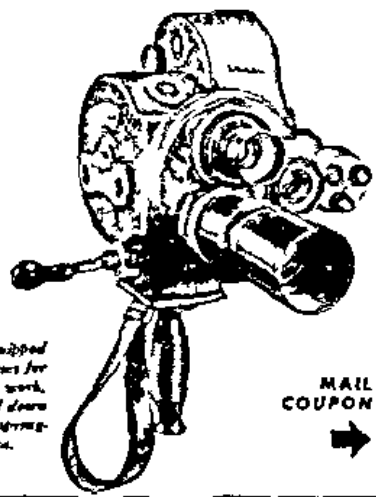
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SHOT UNDER PROTEST

By MARSHALL G McCARROLL
Director of the Los Angeles Bureau of Paramount News

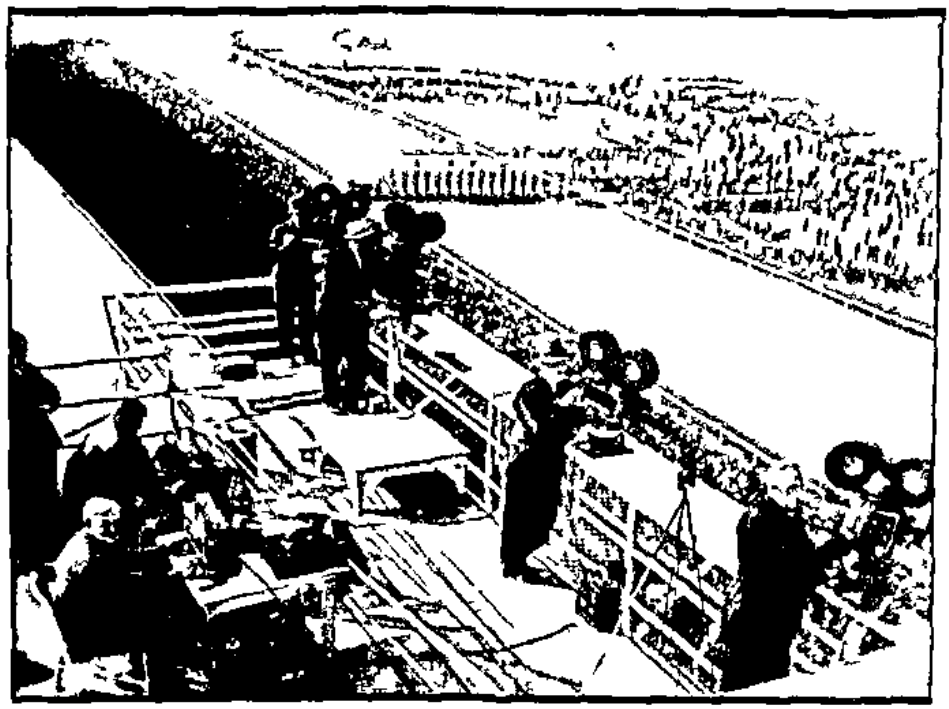
When prominent personages in the news and public authorities refuse to cooperate, when the weather turns a cold shoulder, these are a few of the conditions that make it necessary for newsreel cameramen to "shoot under protest"

IN ORDER that there will not be any come back let me warn you in advance that Shot Under Protest is a typical movie title In other words this story may not be what you expect yet there is a definite connection to the title

The idea arose from the practice of studio cameramen occasionally slating a scene Shot Under Protest when they feel that it should not have been photographed under the existing conditions This is more commonly used on outdoor sets where natural lighting is being employed rather than on interiors where conditions are under better control There is a case on record where a certain first cameraman used this means of protection on a desert location shot and much to his chagrin the rushes showed up this scene as being better than anything else he had shot all day

However my assignment today is to apply this title to a newsreel story To do so I must reverse things somewhat and show how normally many factors conspire to protest the shooting of a newsreel picture *In fact* our ears are constantly ringing with protests from subjects unwilling to be photographed, from the elements which determinedly say They shall not shoot from the newsreel editors who cry for impossible angles and even to the theatre patrons who protest at the shortness of the newsreel screen time Here are a few examples of the above

The hardest protest to overcome is in trying to get newsreel pictures of prominent people who for reasons of their own don't want their pictures made Helen Wills Howard Hughes and Charles Lindberg are good examples of people who give cameramen gray hairs Each is continually doing noteworthy and newsworthy things but each very emphatically dislikes pictures The stillman can snap a plate and run but for movie shots the cameraman has to stick with his subject long enough to get usable footage This protest has resulted in the development of a technique known as walking DeVry shots In using it the cameraman uses a DeVry and Eyemo hand camera equipped with a short focal length lens He then walks along near where the subject is walking and with one eye on the finder of the spring driven camera he shoots as he walks and the precious footage is ground out This system oftentimes necessitates the cameraman walking backward leading his subject, as well as alongside of and behind him on other occasions The results obtained are not the steadiest pictures in the world but never the less usable and could not be obtained otherwise



When big events such as racing classics are held newsreel cameramen must produce against any odds Here is a typical setup showing Movietone News Buck Universal's Alley Pathe's Freeman and News of the Day's Greenwald

Lack of cooperation on many stories makes it difficult to get what one is after Many airplane crashes are guarded by officers whose job is to prevent pictures being made Many a camera has been smashed or confiscated on such occasions Dust bowl refugees who believed they were being ridiculed by the press very violently protested my presence on a recent occasion I was fortunate to escape with equipment intact but managed to make up lost scenes elsewhere One time in West Virginia a Paramount News sound truck was pushed into the river and its camera crew run out of town at gun point while on an assignment covering a miners strike

Next to subjects protest comes "conditions protest By conditions I mean bad weather unsuitable camera locations unwieldy crowds limited time uncertainty of where expected event is to take place and many other obstacles

Weather is always with us in some shape or form and newsreel coverage does not consider whether it is good or bad For instance the Los Angeles Junior Chamber of Commerce guessed wrong and held their 1940 Los Angeles Open Golf Tournament on a very rainy weekend in January Pouring rain made exposures thin and kept away the galleries but the spectacular playing of the winner Lawson Little gave us action and the newsreel came through once more

While airlines have had excellent safety records this past year there was a time a few years ago when stormy weather brought several crack ups Now covering a crack up is difficult enough in itself but having to climb a rugged mountain peak on foot, through rain or snow and having to carry a camera and film certainly adds insult to injury There are several cameramen in Los Angeles who vividly remember being nearly frozen and exhausted while shooting wrecks on 10 000 foot mountains in Utah Arizona New Mexico and others nearer home Let's hope that is a thing of the past

Covering the opening of Hollywood's famous Santa Claus Lane last Thanksgiving night was a tough one too Crowds through which it was difficult to move a camera lack of illumination except at one spot, and the police force doing its best to chase us away from that all combined to make it a miracle that a picture

CAMERA STUNTS COME HIGH

★ **High priced, hair raising horse and wagon stunt shot in midair by dead eye stillmen members of Local 659 makes outstanding exploitation material for Republic Studios' wild west production "The Dark Command"**

PERFORMED for the first time for the screen at a cost of a thousand dollars per foot of film a daring horse and wagon 70-foot leap into a river provided Still Cameramen Joe Walters and Milt Gold with a choice task *during filming of Republic's* heavily budgeted drama, "The Dark Command" which is based on the career of William Cantrell leader of the notorious border guerrillas



John Wayne and Claire Trevor the popular stars of Stagecoach are teamed in another western production The Dark Command which includes a daring stunt never before filmed as related herewith

The action occurs in the script where Cantrell's hordes ambush a posse led by Bob Seton John Wayne plays Seton and Walter Pidgeon Cantrell

Only four men escape the ambush, Wayne George Gabby" Hayes and two other character players And they only escape when their wagon goes over a cliff into a river

Famed stunt man Yakima Canutt devised the stunt when story conferences were still being held on "The Dark Command" Horses have leaped over cliffs before notably in Jesse James" but never a horse and wagon

The scene was shot at Sherwood Lake Canutt built a tilting chute of wood faced with masonite When the chute was tripped it dropped into a straight line with another chute below it making a continuous chute 40 feet long From there it was a drop of more than 70 feet into water

It took Canutt a week to build the chute He had to devise three new automatic trips to solve the situation When he was finished everything was automatic All he and his stunt men had to do was kick the props out and let 'em go

Canutt even devised automatic trips for the harness so that the horses were freed while in mid air When they hit the water the animals were unencumbered Also as a safety measure a cable was built which *followed the wagon as it went off and took* the main weight of the wagon when it hit the water thus lessening still more the danger to the horses

A humane officer was present when the stunt was pulled, and even he admitted the animals suffered not the slightest harm In fact they were worked again the next day There were two horses with the wagon and four stunt men on it when the chute was tilted and the wagon and horses precipitated into the lake

Cliff Lyons and the Irogoyen brothers Udt and Joe worked with Canutt There were no rehearsals, just the one take, and Stillmen Walters and Gold both of whom are members of Local 659, IATSE, had to be on their toes

Walters took a stand on the ground below by the lake about 300 feet from the *landing point Gold was on the other side* of the landing point, also shooting up There were two movie cameras, one by the chute the other on the ground with the stillmen Five cameras were shot by Walters and Gold, two 8x10's and three 4x5's.

It was trigger work for Walters and Gold but they got their shots

"The Dark Command" stars Claire Trevor with Wayne and Pidgeon Roy Rogers, George Gabby" Hayes Raymond Walburn Porter Hall Marjorie Main and Joseph Sawyer are featured players. Raoul Walsh directed with Sol C. Siegel associate producer for Republic

was obtained And that, mind you was right in Hollywood where one would expect the best of conditions and cooperation

Stories like the Elysian Park sliding mountain also contain a protest No warning as to when the big slide would happen then finally it came at night, calling for fast work and use of flares to illuminate the scene Waiting for the Russian flyers from Moscow not knowing whether they would land in Seattle Oakland or Burbank then suddenly finding that they were down in a pasture at San Jacinto That's certainly putting the newsreel man on the spot—a spot which calls for pictures not white

Newsreels are concerned *with sound as* well as picture although the unassuming soundman does not attract as much attention as his more publicized partner the cameraman Here's one instance where the protest was most evident to the soundman—when Helen Love was coming out of a coma in the Los Angeles County jail Chief Jailor Clem Peoples consented to let the newsreels photograph this subject because of its scientific interest A hard walled hospital room equipped with lights was good enough for photographing Helen Love's awakening after several days of coma but the acoustics were so bad that voice picked up on a conventional microphone was unusable The ingenuity of the soundman brought a solution to this impasse by placing a tiny crystal microphone on the pillow a few inches from Mrs Love's lips Thus was recorded with *satisfactory fidelity her first words upon* awakening

Floods, fires, shipwrecks and practically any kind of disaster usually protest viciously the approach of the *newsreel cam*eraman He not only has poor photographic conditions but a difficult problem to solve in merely getting to his subject

After the hard work of getting the story on the film protests often come from the editor who sits at a mahogany desk in New York and imagines the cameraman is working under ideal conditions He asks for more angles better negative quality and a host of other things impossible to get under the circumstances however we excuse the "man with the excellent hindsight" and dive into each new assignment with the determination to get the utmost out of it Difficult as it may be some way over each hurdle is usually found but the faithful reader who has followed this far probably will agree that the newsreel man is certainly entitled to "slate" his pictures Shot Under Protest"



Four men, two horses and a wagon were half-way down a seventy-five foot drop when they were "stopped" in this spectacular shot by Joe Walters, member of Local 659, IATSE, during filming of Republic Studios' "The Dark Command." Ingenious devices were rigged up to accomplish this stunt and ingenious plans were laid by camera crews to record the event.

back shutter for speed

By CLIFTON MAUPIN
Member, Local 659 IATSE

★ **Maximum advantage of camera's fast focal plane shutter is utilized by new synchronizer described here in actual tests by ace still camera man under rigorous studio assignment to "stop" Zorina, famed dancer**

ONE OF the l- problem- of the studio still photographer's life is getting good stills of dance routines, skating numbers fights and other really fast action If the scr pt places the action outdoors the still man has no trouble for all he has to do is wind up the back (focal plane) shutter of h Graphic to a speed that will "stop" the action—and sh oot.

B t if as is usually the case the action comes in an interior sequence or an in door exterior that's shot on the stage the poor still man is in line for a real head ache He is wedged firmly between two photographic irreconcilables On the one hand, he *has* to use a fa t exposure to freeze the fast movement On the other he ha- to make h exposure with the lighting ava lable on the set, which doesn't begin to give enough illumination for really h gh- peed exposures To compl cate the problem he knows he must stop down his lens to get the required depth of field

The average set today is lit to give a correct exposure for the motion picture camera that is, using Plus-X or the new T pe II DuPont, rated at Weston speeds of 32 t 4 a full exposure at from f 3 o f 5 at 1 50 t second Ordinarily the still ma gets a sl ght break since he uses ut hlms like Ea tman Super Panchro Press which have Weston speed of around 64 But this is rather more than off-set by the fact that his lenses are lower (usu ally around f 4.5) and have to be stopped down anyway for depth. If he shoots wide open the best he can do is about 1 50th second—and if he stops down for depth he's got to drop his expo-ure to around 1 10th second That won't stop much motion!

Durino the la-t few years the introduc tion of flash-globe synchronizers has been a bi- advantage in many kinds of still work, but it didn't help this particular problem. The synchronizers that were available could only be used with the front (lens) shutter of the Graphic which allow- speeds only up to 1 300th second—and in many studios, experience has taught us not to use these shutters at speed faster than 1 200th! And if you've ever seen Sonja Henie skate or Zorina dance you know these speeds aren't nearly fast enough to stop the rapid motion.

But within the last few months a new synchronizing device for the focal plane shutter of the Graphic has appeared. It's called the Sistogun, and it was invented by Philip de L. Patterson and new paper photographer Ernie Sisto

Having had my trials and tribulations with plenty of those ungettable speed shots in many of Sonja Henie's films—to say nothing of a surprising succession of fights fast comic stunts, and the like during the last year—I decided to try this new syn chronizer on my own Graphic

I found the Sistogun to be a remarkably simple little device but a very practical one It consists of a simple little contact mechanism which fits under the regular curtain winding knob of the Graphic's back shutter The winding knob acts on a small, curved cam which normally holds the flash contact open As the knob turns with the shutter's travel the knob slips off the cam, closing the contact.

There's very little tension involved in this arrangement, for the contact is ten sioned by an unusually delicate hair-spring And as the contact-cam only engages with the shutter mechanism at the start and fin sh of the shutter's action there doesn't seem to be much likelihood of any drag or delay on the shutter's action

In order that the flash won't be fired accidentally when the shutter is being wound or adjusted there's an additional contact operated by the shutter release lever The flash can fire only when both contacts are closed

Two synchronizing adjustments are provided. One compensates for any ordinary variations in the position of the winding knob The other takes care of precise syn-



● *Stopping motion in studio still shots of Vera Zorina shown on fac ing page in a scene from the 20th Century Fox production "I Was An Adventuress" was the difficult as signment satisfactorily solved by Jack Woods Using a Sistogun synchron izer that operates with the focal plane shutter of the Speed-Graphic camera he "fro e" the beautiful Zorina in the midst of her ama ing dance routine shooting at 1/440th second Clifton Maupin author of the article tested the Sistogun at home using his ener getic and captivating daughter as the subject A shutter speed of 1/825th second did the trick*



chronization and enables you to be ab o lutely sure of perfect sync Naturally the wire filled type of flash globes must be used as their longer peak makes it pos sible to synchronize them with the focal plane shutter Incidentally the job of fit ting this synchronizer to a Graphic is simple enough for any average camera mechanic it does not have to be a factory job

Any type of battery box and reflector can be used with the Sistogun as long as it will accept the telephone type connectors with which the synchronizer is regularly equipped

My first chance to test the Sistogun came an evening or so after I d had it installed on my camera My little girl decided it was time to give her doll a bath—and pro ceeded to do so u ing a seltzer syphon as a shower There was a picture So out came Graphic Sistogun and flash globes and the test was on The camera was load ed with Agfa Superpan Press film and I made the exposure at f 10 with the shut ter at 1 825th second

The result showed that the device worked very well The movement was well stopped The exposure was ample and uniform clear across the negative—al ways an important thing to think of when you synchronize a focal plane shutter

A bit later I tried another shot of the young lady bouncing up and down on her bed at bedtime This was shot at f 8, also at 1 825th second Again the result was perfect—and I d stopped movement I nev er could have captured with a front shut ter flash

Soon after came a chance to try the new focal plane synchronizer under studio conditions Twentieth Century Fox was making a production called I Was An Ad venturess starring Zorina the dancer All of us in the still department knew that would mean some of those hard to get speed shots of Zorina dancing As a matter of safety we decided that whichever of us was ass gned to the picture would use my own Sistogun-equipped Graphic for those shots In addition I believe a second Si togun was installed on one of the studio s cam eras

When "I Was An Adventuress got un der way I had already been assigned to another production and Frank Powolny and Jack Woods drew the Zorina assign ment with Woods specializing in the ac tion shots When they reached the dance sequences Woods saw he faced a real problem in getting those action shots The set was a beautiful thing but it provided a background of highly pictorial trees made entirely of jet black glass In addi tion Zorina wore an equally decorative costume—which was also jet black!

In view of all these black non reflective factors in the pictures Woods decided to play a bit on the safe side in exposure He used Eastman Super Panchro Press cut film and made his expo ures at f 8 and 1 440th second This was distinctly on the conservative side for the Graphic s focal plane Lack shutter yet it was rather more than twice as fast as it is practical to go with ordinary front shutter synchroni zation

The results were excellent Regardless of whether Zorina bounded toward the cam era or across the field the movement was stopped perfectly In spite of the black set and costume the exposure was ample Woods got a group of shots that couldn t have been obtained in any other way

From this experience I m convinced this new focal plane synchronizer is going to prove an extremely valuable adjunct to stu dio still work Luckily the problem of getting these extreme high speed action stills doesn t come up too often—but when it does and the publicity department starts insisting that you bring back action stills of this action or that you d give almost anything for equipment that would make such shots possible What s more these things seem to move in cycles for if one of these speed shot jobs bobs up you can somehow expect that three or four more will follow it during the next few months

There s another advantage to using syn chro-flash exposures for these shots too In the case of dance numbers most studios have at one time or another tried the idea of reenacting the dances for the stills on an outdoor set where we can have the advan tage of bright sunlight and a white back ground to say nothing of plenty of hot re flectors

Aside from the fact that this doesn t give any idea of the setting of the actual dance the combination of bright sun white walls and bright reflectors gives you a tremend ous problem in getting pleasing expres sions on the players faces Very few of them can face a battery of reflectors with out squinting and blinking and such ex pressions are hardly desirable!

But shooting on the actual set with a high speed synchronized flash cures both of these troubles Naturally you get the proper background But even more im portant the flash is so quick that the actor doesn t get a chance to blink until after your exposure is made! As a matter of fact the flash is by far the easiest light on the players eyes I e use it all the time in making stills of Shirley Temple and the Dionne Quints whose eyes must be pro tected at all times

silent partners

★ **Photographers and projectionists are both vital to attaining highest artistry in presenting motion pictures to the public**



Illustrating the fact that the finished motion picture as seen on the theatre screen by John Public and family is the composite product of many factors and techniques is the above composite photo by Ernest Bachrach member of Local 659, IATSE From photographer to projectionist there is a well defined routine requiring close cooperation of talents for maximum results

By DANIEL B CLARK
Executive Director of Photography
20th Century Fox

and

PAUL R CRAMER
Local No. 150 and 165
I A T S E

Since the advent of sound in the motion picture industry a new technique has crept in so subtly that unless one has been away for a length of time it is hardly apparent, yet it is definitely there This technique can be segregated into five component parts that have been affected First, the Art of photography, aptly described by Danny Clark, head of the camera department at 20th Century Fox studio — Editor's Note

MUCH has been written and said regarding the cooperation between cameramen and the various other departments necessary in the making of motion pictures Time and experience have proved that too much stress cannot be laid upon the importance of coordination and cooperation among all departments and the cameramen in the adaptation composing and photographing of stories for the screen These are accepted facts, which are generally practiced throughout the motion picture industry in so far as physically composing a motion picture is concerned

The writer is of the opinion that there is one great step necessary for perfect screen display, which through the years, has been overlooked, or perhaps generally neglected that is, a closer cooperation between the cameraman and the projectionist, whose business it is to take the unified work of the writers, director, cameraman and laboratory and with his professional tools, project upon the screen the final treatment which must be presented to John Public for approval or disapproval The projectionist's work is the ultimate answer to the successful display of all pictures

Projection operators throughout the country are or should be, artists in their own right This is proven by the fact that some of the world's greatest Directors of Photography come from the rank of projectionists The artistic ability of the projectionist is not always apparent probably because of the fact that they are submerged in a two-by four booth where they are never seen and seldom ever heard from in the light of their extreme responsibility, or perhaps in many cases they themselves do not fully appreciate their responsible position in the great industry of which they are of such vast importance

All too often the cameraman struggles to and does achieve an artistic photographic product, but when viewed on the screen it lacks definition and quality comparable to his efforts The reasons for this error are various and sundry, such as inadequate

(Continued on Page 26)

down SOUTH AMERICA WAY

By OREN "BOB" ROBERTS

★ Conditions in picture industry below the Equator related by Hollywood expatriate. Possibility of expansion foreseen in order to secure authentic dialects and scenes for pictures scheduled for release in Latin nations.

IN THE four years I have spent in the Argentine I have had to act as cameraman, co-director, cutter and even supervise sound, as there are not many expert technicians below the Equator. Last year, for example, there were only six Americans in the Argentine picture business—four cameramen, one sound man and one lab man.

Seconds and assistants there are quite efficient. My second cameraman was the son of an Italian cameraman of thirty years experience, having been in the Argentine about twenty years. He had been running a laboratory and doing newsreel work. His son, Perusi, has grown up helping his father and understands cameras very thoroughly. On the five pictures on which he assisted we never had a retake that was due to lack of focus.

An assistant gets one hundred and fifty pesos a month. In our money that is about eight dollars a week. The salary of a first cameraman is not more than about what an operative cameraman gets here—400 pesos a week or about the same as $400 a week there. One can live well on this and afford a yacht. It is considered very good pay. The average working man makes 120 pesos a month.

The San Miguel Studio is the only studio using Mole Richardson lamps. Jack Haines, formerly of Columbia Studios, turned out the best sound they have ever had in Argentina. When they first installed the RCA equipment they did not send a technician from Camden, N. J., but had a local man install it. Jack found it was installed wrong and had to change it over to make it work properly.

One will not find a gold mine there, but if a man has a bona fide offer from Argentina he probably will enjoy it. What is offered in pesos is equal to dollars here and if it is enough he can live well. The bad thing is that when you come back and change your savings to American money you don't have much of anything. If you stay right there and work everything is all right.

Technicians and cameramen are needed. If a man goes down on his own he might have to spend two or three months before making a connection. Four or five Hollywood companies may be down there as the Spanish pictures made in Hollywood are not a success in South America for this reason. If the story is an Argentine locale the typical Hollywood made production at best will have only five or six Argentine actors. The balance will be from Chile, Colombia or Mexico and the dialects all will be different. Three or four brothers will be speaking three or four different dialects. They cannot get enough actors of one Spanish nationality in Hollywood to fill out the picture. Consequently it doesn't ring true.

Buenos Aires lies along the edge of the river and the surrounding country is absolutely flat for 1500 miles in any direction. It is all pampas, or prairie. There is nothing that even resembles a hill.

In Buenos Aires there are now six major studios, new and modern. They use the Super Parvo, a French camera, and RCA sound.

Marco Parkus was gaffer for Paul Perry on two of his pictures and also was used by Bert Glennon on his recent trip down for "South American Way." Parkus formed the first electrician's union in the theatres.

The top salary for a studio sound man is 600 pesos a month. Jack Haines was getting about 2000 pesos a month, almost as much as some of the directors receive.

Among the picturesque native characters is the gaucho, the Argentine cowboy. His unofficial uniform is a pair of oversize golf pants called *Lombaches* which are tucked into short boots and a blouse with neckerchief. His hat usually is turned up in front.

The typical gaucho has a flowing black mustache. He does not carry a gun but a knife. When gauchos fight they pull their knives and run around each other until one can grab the other's wrist. Contrary to popular belief they do not throw knives. Brawls in barrooms are always settled by knives and not by guns.

Only last year a senator was shot down from the gallery by an Argentine lawyer who resented what the senator had said about the state he represented. He was sentenced to five years.

There is no capital punishment. Every town has a police station and a comisario or chief of police who is head man of the village, taking precedence even over the mayor. He runs that section as he sees fit. If two gauchos have a fight and there are enough witnesses to testify that one or the other was justified he listens to their story and very often will let the offender go. There are no jury trials with judges out in the country.

Outside of Buenos Aires it is sparsely populated. The Argentine is about one quarter the size of the United States, with a population of 12,000,000. The population of Buenos Aires is 3,500,000. Outside of Buenos Aires conditions of about 50 years ago exist. Most of the vehicles are horse-drawn and practically everyone uses candles and lanterns to light their homes.

San Isidro is being set up as a sort of Hollywood. The race track is close by. San Isidro is a small pueblo about a half hour's ride outside of Buenos Aires. It has a new late type of race track with beautiful grounds surrounding it. In this community there are three studios. Ground has been broken for two more. Also the Alex Laboratory, the largest in Buenos Aires, is moving to San Isidro. Paul Perry has signed a contract to set up color for them.

At the present time Argentine studios are not doing any trick work because of lack of equipment. However, at one studio I tried to introduce top miniatures to be shot at the same time as the set. They turned out very well and after I left the studio the producer decided to use top miniature on his next picture.

It was very simple but not knowing that top miniatures must be built to a certain scale, hung according to scale and that the scale determines the distance the miniature is hung from the camera, they were not able to make their top miniature fit. Consequently they gave up the attempt of trying top miniatures on the sets. I tried to sell the idea to other studios but directors and producers are afraid to attempt this method of working as they do not understand it and fear it will hold up production.

Up to now we have not been able to do much double exposure work or background projection as we have no cameras with steady movements nor have we any projection machines with camera movements. However we hope during the coming year to remedy this.

Color Correction

In the illustration on page 4 accompanying the article "The Theory of 3-Color Photography (Part I)" in the March issue under the heading "Subtractive Synthesis" white light is indicated as being produced by "blue" "green" and "green" rays. This obviously is a typographical error and should read "blue" "green" and "red" rays.

FACTORY METHODS COME TO PICTURES

By WILLIAM DRAPER

In JULY 1936 this magazine carried an article by the writer describing a new system of making wipes, laps and other effects upon which he was applying for patents and which he chose to name "Tailor Made Effects." Possibly "Hand Me Down" effects would have been a more appropriate name for although these effects can be tailored to the customer's order their outstanding value is that they may be premade and as a consequence can be sold across the counter

In the making of effects there are two necessary steps First a lavender or suitable positive of the scene must be made and second a duplicate negative made from the positive In one of these two processes the interlacing or overlapping of the two scenes must take place Because it is infinitely safer to manipulate the lavender or positive as it is not only tougher but only a minute fraction as valuable as the negative, the interlacing is almost always done in the making of the dupe negative To accomplish this end numerous methods are resorted to Optical printers are built traveling mattes representing hundreds of designs and mechanical methods of achieving effects are built

With "Tailor Made Effects" the manufacturer eliminates the middle man so to speak By impregnating the raw lavender stock upon which the negative is to be printed with the design of the effect desired the lavender is made to act as its own traveling matte thereby eliminating the necessity of anything for the duping of same other than a printing medium

Just in case this description is not clear we will put it another way You still have to make a lavender from the original negative and you still have to make a dupe from the lavender but because the lavender is a combination of a scene and a traveling matte and because the lavender which overlaps it is also a combination of a scene with a traveling matt complimentary to the first, the lavenders themselves hold out areas in the dupe negative for the second scene and the second lavender protects the scene that has previously been exposed

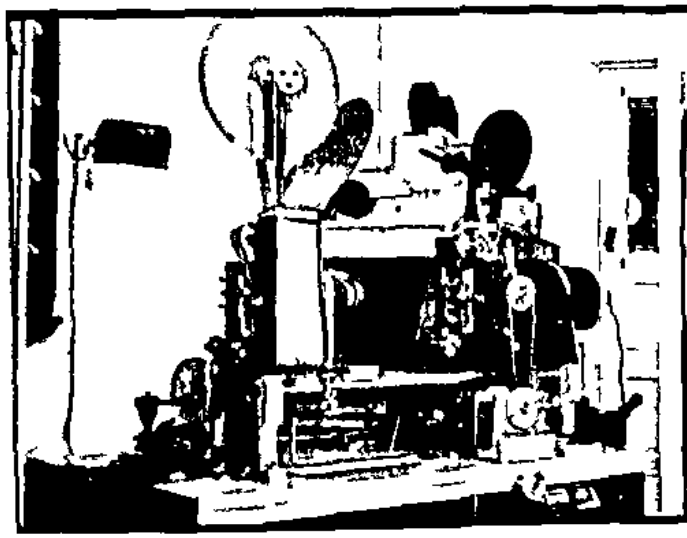
It all adds up to this Instead of carrying the raw stock, a lavender of the scene and a traveling matt of the effect necessitating an optical printer, this system combines the traveling matt and positive of the scene on one piece of film which can be handled in any duping medium capable of carrying it together with the raw duping stock In addition it permits the making of the effect or perhaps we should say the impregnating of the lavender raw stock with the effect in advance of their actual need They can be prepared by thousands and shipped anywhere on earth The only limiting factor being the age of the raw stock If the plan is ever generally adopted there must be a rotating system that would keep them relatively fresh.

With the issuance of letters of patents in 1938 the writer determined to make one grand effort to put his system to work Believe it or not the effort is still in the process of incubation It seems incredible that such a simple idea would present such a multitude of problems Actually a technician could walk into a room containing almost any kind of printing medium and within 30 minutes have taken all the steps necessary for making a wipe but to prepare them for the market a market which might conceivably include every amateur on earth and to make them so that instead of taking 30 minutes of a skilled workman's time they will take 5 minutes of a printer's time that is a different story

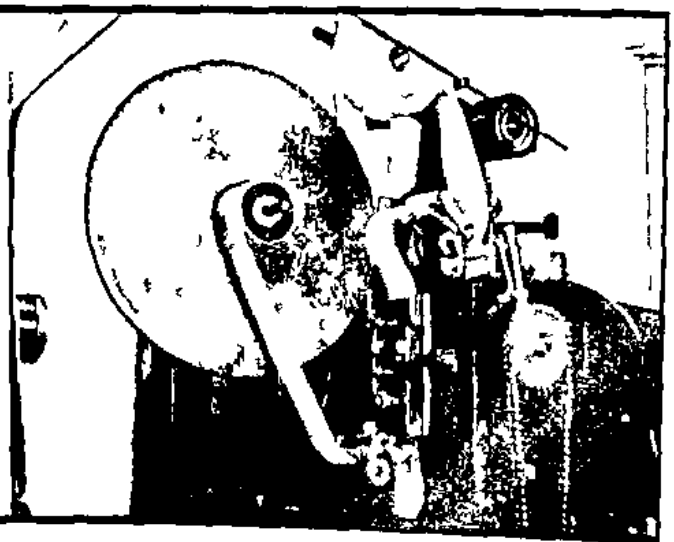
Just for example There must be no compromise with quality The producers must not be asked to accept anything less than they are accustomed to In fact they should be promised a more standardized, a more dependable product They must be as near fool proof as possible and they must be available in any design that might be asked for A conservative estimate of the number of wipe designs that might be called for we will say would be 100 But any of these 100 designs might be called for in lengths of from 8 frames to 6 feet Say you might compromise with the customer with five steps in between these two extremes it would be necessary to prepare 500 master mattes if it were not that any one of the 500 might be called for in a hard line medium blend soft blend or wash effect We are just supposing of course, so it will do no harm to say that this would bring our stock of master mattes to 2 000 containing in excess of $100 00 in processed film and worth conservatively $6 000 in labor alone which would probably be all right if it would work The trouble is it wouldn't work

It just so happens that a truly opaque matt which would be essential for the protection of the scene area of the lavender and a truly delicate blend which would be necessary for soft blends or wash effects just refuse to associate themselves You can make a wide delicate blend on negative stock but your matt area will not be opaque or you can make an opaque matt on positive stock but you lose your delicate blend

(Continued on Page 24)



Shows machine set up for photographing traveling mattes in the optical head



Shows optical head being used as a contact printer

shedding light on light tests

● Technically speaking "Light Tests" are produced for the purpose of judging the positive density of a given scene when exposed through the scene negative to various degrees of light controlled by time units. The resulting "strip" is graduated from under exposure to over exposure, each frame numbered to correspond with the Light Number to which it was exposed in the printer. By examining the strips a cameraman may arrive at some id a relative to the efficiency or inefficiency of his set lighting and make corrections accordingly. Whereas other personnel units of a troupe may enter a darkened projection room and view the result of their collective daily efforts, in most instances a cameraman must depend greatly upon these strips of positive for any information which he may desire with respect to the previous day's shooting. Many things other than mere density can be determined by judging these "cameraman's rushes." The cameraman notes his light and general scene composition. The operator may observe his framing of scene characters such as head room, side lines and if indeed the actor is in the scene at all. The assistant may check his focus and also determine if the camera itself is "scratching" or out of register. The trio assembled in the cut out evidently have none of these worries but are proud of their work on "Renfrew of the Mounted."



Intently scanning light test strips from "Renfrew of the Mounted" are (left to right) Lester Schorr, assistant, Mac Stengler, cameraman, and Ralph Staub director all members of Local 659, IATSE. These "cameraman's rushes" are reviewed frequently in over-the-shoulder fashion on fast productions where there is not time for a regular projection room showing.

Wartime Subscriber

● Ramifications of the European disturbance extend even to INTERNATIONAL PHOTOGRAPHER as revealed in the following interesting letter from a French subscriber who has been called to active duty in defense of the Tricolor. The envelope carried the '*Controle Postal Militaire*' mark of the censor.

PARIS January 20th 1940

Dear Sirs,

I have been for many years a regular subscriber to the "International Photographer" your monthly review being of great interest for me, as Chief Recording Engineer of the 'Studios de Neuilly."

Owing to the general mobilization in France, I had to leave my civil occupations and to join the army in September 1939.

"The drastic regulations regarding foreign exchange prohibiting practically the payments abroad except on special licenses very difficult to obtain, I am not in position for the time being to send you the amount of my subscription for 1940.

"As I would deeply regret to be deprived of your monthly review, I beg to ask you to let me know whether it is possible in the present circumstances, to maintain my name on the list of your subscribers and to continue the service of the "International Photographer" until I can pay to you the amount due by me, from January 1st 1940.

"You may send your reply to my ordinary address wherefrom it will be resent to me.

"Thanking you in advance, I am,

Dears Sirs,
Yours sincerely,
Jacques G. Carrere
50 Boulevard Emile Augier
Paris 16eme, France."

M. Carrere's request has, of course, been granted.

Incidentally this communication focuses attention upon the wide geographic spread of INTERNATIONAL PHOTOGRAPHER'S circulation which covers the professional photographers in the U. S. and Canada as the official publication of Local 659, IATSE and in addition reaches other motion picture industry technicians and executives as well as a large reader audience of photographic enthusiasts throughout the world.

Question

Dear Sirs

I have just read your magazine "International Photographer" for the first time and think it is grand, it ends a long search on my part for such a publication.

Will you please advise me of the names of some good books on sound recording and general studio technique the cost of which are not prohibitive.

Thanking you in advance I remain

Very truly yours

Frank F. Sherry, Jr.
1212 N. W. 7th Court
Miami, Florida
March 16, 1940

Answer

Ghirardi's Radio Physics Course, 2nd edition is recommended for elemental sound recording.

Photography by Dr. Mees for elementary photography.

Neblette's Theory and Practice of Photography for something more advanced.

Eastman Kodaks Elemental Photographic Chemistry is splendid for just what the name implies.

Thank you for being our first customer.

"THE WESTERNER"

A GRIPPING TALE, PICTORIALLY TOLD

★ Gary Cooper — Walter Brennan
Fred Stone — Doris Davenport



"THE LAW WEST OF THE PECOS"
Personified by Walter Brennan

"Judge" Roy Bean, rugged individualist domineering old reprobate and self-appointed overlord of the long horned cattle ranges of Western Texas, is of that verile, bombastic cantakerous type now practically—and happily extinct

Some years before this seething episode takes place he had been a dashing swashbuckling hell bent for breakfast cavalry leader in the gallant Confederate army He is still an unreconstructed rebel and religiously preserves his faded and tattered uniform and his long cumbersome blood stained saber These he wears at annual reunions where foregather grizzled old boys to relive the hectic days when they wore themselves out licking the "Yanks"

He is the hard fisted hot headed leader of the cattlemen in their bitter war against the homesteaders struggling to fence in enough virgin acres to protect their homes their standing crops and their water holes

Naturally he despises the farmers—mostly from the north who toil in the fields—as did his own slaves not so long since To his fierce hostile mind they deserve only quick and violent extermination So his hard riding long lumber and weather beaten cowboys cut fences crash roughshod through standing crops and trample lush gardens under galloping hooves

And the Judge who is the 'Law West of the Pecos,' turns an unsympathetic ear to their complaints and grants no redress to the long suffering victims

'The Westerner' is the story of a man and an era, of a new land and its struggle to lift itself from the domination of an amazing force a personality so strong that today, after sixty years its presence is still felt across the broad acres of Texas, that section of the Lone Star state lying west of the Pecos River and now one of the great agricultural districts of the world

In the 80's bitter war is on between the cattle interests, ranging their slab-sided long horn steers on free government land, and the farmers, struggling to establish themselves on homesteaded acres to fence same against roaming stock, to secure their just rights to life giving water, and to erect humble homes, plant their virgin acreage to grain and corn, and to raise their garden stuff, as they were accustomed to back home

The long limber, weatherbeaten cowboys, to drive their herds to newer pasturage and especially to water, cut and break down the settlers' fences crash ruthlessly through fields of growing crops and trample under galloping hooves choice young gardens It is a bitter relentless war—often bloody

Jane Ellen Mathews handsome daughter of a homesteader, at the point of a shot gun, drives marauding stock from her father's fields and then rides wrathfully to the only minion of the law, one "Judge" Roy Bean—notwithstanding he is self appointed, and has a sympathetic ear for only his friends and fellow marauders the cattlemen, and is widely known as "The Law West of the Pecos"

The court is held in the "Judge's" delapidated saloon, whose dirty walls are plastered with freshly printed posters, announcing the coming soon of "the Jersey Lily," the great Langtry, who is to show in nearby Fort Davis in the 'Blue & the Gray"

Into this court madly dashes the girl to find a trial going on in which a presentable young man, while peacefully on his way to California is arrested by two of the "Judge's" henchmen, and dragged into court on a trumped up charge of horse-stealing, which generally means swift and violent hanging

Trying vainly to get a hearing on her own affair she quickly learns that horse stealing is a much greater crime than the destruction of poor people's property So while her mad is up, she swings valiantly into defending the young man

While grateful to her—and intensely interested, Cole Harden, the prisoner has quick wittedly gotten hep to the Judge's' one weakness this yen for women) Noting his roving eye centering on

(Continued on Page 16)

Gary Cooper portrays the valiant and resourceful Cole Harden



All pictures in this story of The Westerner taken by Robert W Coburn veteran stillman Local 659 IATSE



Cole Ha den Col fo n a bound t efo e th e Judge for h se-thefs Hanging certa n Ho lv defen ded by Jane Ellen hon estea ler th ere u h her own t oubles



Langtry s pe ste s sn r om snd cote the "Judge s" infatuat on Ge t ng s se Cole buncoes h m into accept ng lock of her ha r Hang ng deferred pa t es hol nob



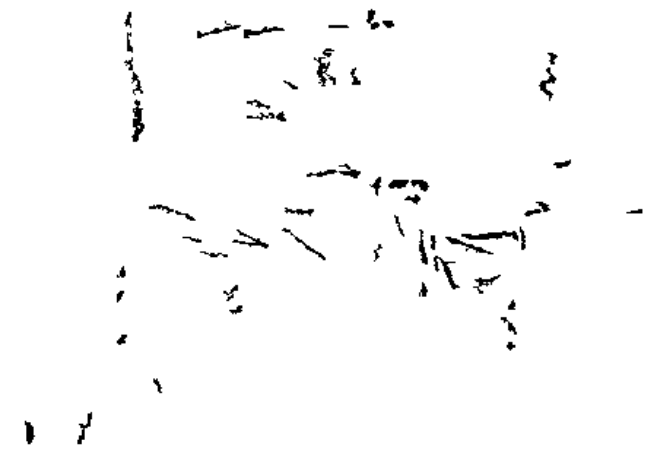
Befo e lea ng for oundup Cole cl ps lock f om Jane Ellen s head to palm off on the Judge as Lang v's ve y o n



Begu led the homestende s celeb ate But the treache ous "Judge u uh lock n hand sets men to bu n ng the r homes and crop



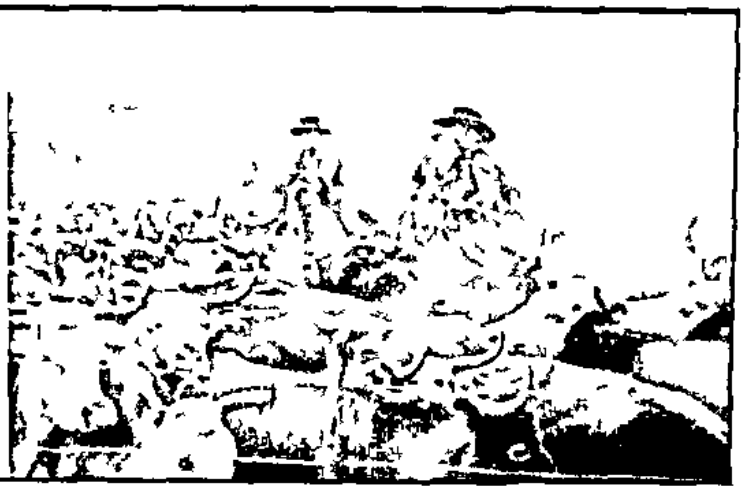
Langtry p esents The Blue and The Gray Clad in Confederate regun en als the "Judge h s bodygua d po ed outs de seats h m self—th e only spectato



The orchestra sta ts but collaring the leader the "Judge" cal for "D x e nstead Also deman ls a confede ate v ctory e d n for the play



Granted some liberty, Cole visits Jane Ellen Finis homesteaders bitterly persecuted by cattlemen Espouses their cause Attempts peaceful settlement



Promising quick delivery of Langtry lock from El Paso, he persuades the 'Judge' to help him round up marauding cattle from homesteaders' lands



Furthermore the triumphant 'Judge' changes the name of his burgh from Vinegarroon to "Langtry" amidst drunken applause



Cole, sensing the jig to be up secures in Fort Davis a warrant for the "Judge's arrest—dead or alive



Rising curtain discloses Cole Harden with guns acock The outraged "Judge" draws his own Cole fires leaps down and picks him up



Terrified, Langtry appears, and the 'Judge' gestures toward her There he stands, bends to kiss her bejeweled hand, shudders—slumps—and dies



Naturally suspicious of anyone hooked up with the "Judge" the homesteaders are slow to accept Cole Harden's good offices. Besides that he contacts one named Wade, a suitor for the hand of Jane Ellen, a terrific fist fight ensues with Cole the victor.

the alluring "Jersey Lily." Cole sizes him up as an amorous old sport and convinces him that he—Cole Harden—is a personal friend of the actress, and has—cached in El Paso—a lock of the lady's hair which might interest "His Honor." It does. The Judge sets aside for the time being the verdict of the jury. And the Court and the prisoner proceed to fraternize.

It even goes so far that the prisoner is permitted to visit Jane-Ellen, her parents and her neighbors. While waiting for the mythical lock of Langtry hair to arrive from El Paso and cooking up some scheme to get by with the fairytale, Cole hears a lot about the wrongs suffered by the homesteaders, and decides to forget California for the time being, and try to diplomatically make peace between the warring factions.

Owing to the natural suspicion of anyone mixed up with the "Judge," his efforts are not so successful, and are hindered some by his getting into a goshawful fist fight with a suitor for the girl's hand. However, being victorious, he proceeds to work on the "Judge," and by assuring him of quick action regarding the coming from El Paso of the treasured Langtry lock, he persuades him to help him round up the cattle off the homesteaders' lands. With peace partially assured, Cole departs for the roundup, but before leaving, he clips a lock from the very beautiful head of the fiery Jane-Ellen, with which to flim flam the philandering old reprobate into the belief he possesses the real thing his gnarly old heart yearns for.

Beguiled into believing the temporary truce a permanent peace, the homesteaders proceed to celebrate in good old country style. But the treacherous "Judge," now that he has the Langtry treasure, hardens his heart some more, and sets his hard boiled followers to burning out their poor shacks, and firing their standing grain and corn while they were making merry. He even does some celebrating himself by changing the name of his own burg, Vinegaroon, to "Langtry," in honor of the great actress he soon hopes to impress.

Jolted into the sense of futility of his efforts to bring about peace between the homesteaders and the ruthless cattlemen, Cole races to Fort Davis, and swears out a warrant for the arrest of the "Judge." He finds there is a drawer filled with similar documents. But with none brave enough to serve them, they remained idle. However, his mind is made up to serve this particular warrant—dead or alive.

The day of the great show arrives. Secretly the "Judge" has bought out the house. Clad in his tattered and faded old Confederate uniform, and with clanking saber and bristling arms galore, the old man accompanied by an armed bodyguard breezes into town. He posts his guard at the Opera House door, leaving them to cool their heels there, he enters and seats himself the one and only spectator.

The orchestra bursts forth. But the tune is not to the "Judge's" liking, so collaring the leader he calls for his favorite—"Dixie." While at it, he demands that the play be changed to end in a Confederate victory.

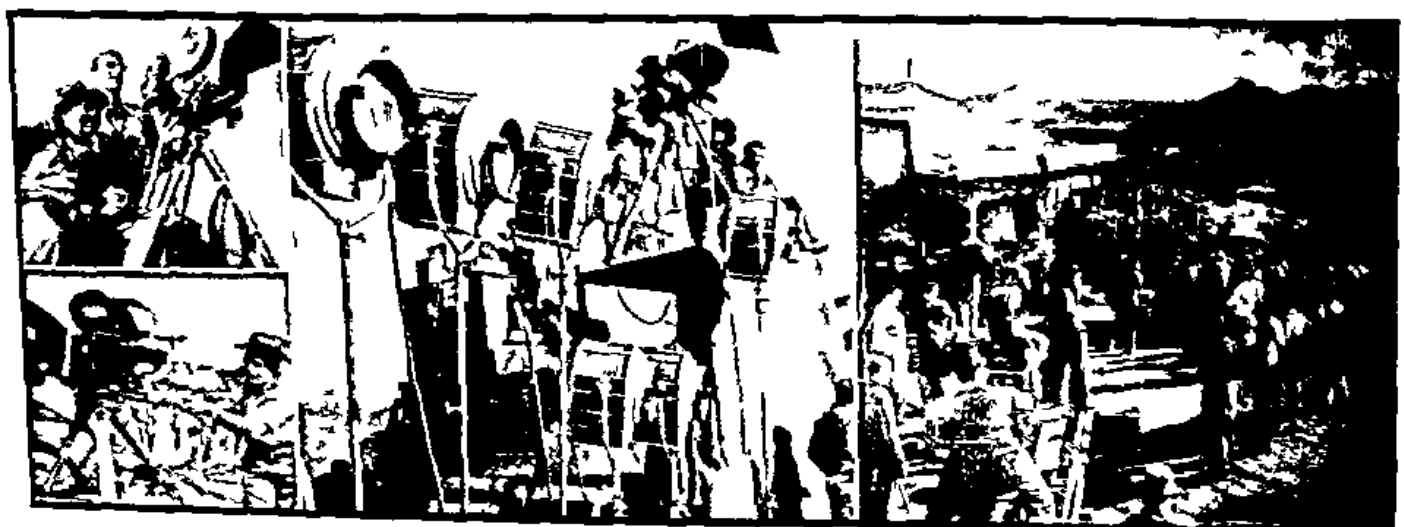
The gaudy advertising curtain goes haltingly up. But the stage presents not the glamorous "Jersey Lily" he ardently expects to see, but the determined figure of Cole Harden, with two guns ready for action. The astonished old man springs wrathfully to his feet and draws his own gun. But Cole shoots first, runs to him and picks him up.

In great terror Langtry appears and the "Judge" beckons to be taken to her. Cole supporting the old man on his uncertain legs, stands him before her and introduces him as "Judge" Roy Bean, an old and ardent admirer.

On her gracious acknowledgment, the "Judge" answers "By Gobs, I'm pleased to meet you."

He bends to kiss her bejeweled hand and—slumping into Cole's supporting arms, the "Judge" dies.

With pity in his eyes and in his voice Cole murmurs "So long, Judge."



NEWS OF THE MONTH

Paul Park in Print

● Paul Park, member of Local 659, IATSE, has received national recognition again through his outstanding work as head of the photographic unit of the Southern California Art Project An article by him will appear shortly in the forthcoming publication "Art for the Millions," describing the government's work in its art program Park's article will deal mainly with the photography of works of art and documentary work of early Californiana His photographs have appeared in many national and local publications and have aided greatly in developing national pride in the creative arts and cultural past of this nation

Detmers in Florida

● From Coral Gables Florida, where he has been working on a Movietonews Fred H Detmers wrote last month to say that he was having a "swell time" The camera crew and cast for the picture, which was a one-reel Vivyan Donner 'Fashion Forecast,' flew from New York in a chartered Eastern Airlines ship This is Detmer's second Florida trip this winter, which would make most cameramen envious except for the news reports of the 'unusual' cold spell there

Camera Repair Shop

● Theodore M De La Garde, member of Local 659, IATSE, now is specializing in making camera accessories in an experimental shop he has established at 2926 Stockbridge Avenue, Los Angeles He has a complete line of machine tools for performing any type of precision work on small parts Repairs on still cameras, 35 mm cameras and projectors will be handled speedily and satisfactorily he states De La Garde holds many patents relating to camera equipment The telephone number is CApitol 9319

ON LOCATION AT TUCSON ARIZONA

On the opposite page is a layout of stills, shot by Coburn, of the taking of "The Westerner," directed by William Wyler

On the upper left hand are Archie Stout and Rod Tolmie Below, James V Murray In the center Bert Shipham, Eddie Garvin and Gregg Toland are roosting aloft among the conglomeration of lights On the right Bert Shipman is doing a dolly shot

Roll call on the job showed First Cameramen Gregg Toland and Archie Stout Second Cameramen Bert Shipham and Art Arling Assistants, Ed Garvin, Mike Doyle, Rod Tolmie and Jimmy Murray

5 Times 5

● Harry Smith, the traveling Pathe cameraman and a member of Local 644, New York, is in Los Angeles He is widely known as the only cameraman who photographs the quintuplets, whose latest picture is called "Five Times Five"

Brother Smith admitted that there is no planned set up in shooting the quintuplets The first step to be taken is to get acquainted with the little ones, and this generally takes from two to three days During that time, he has an opportunity to observe the characteristics of the individual, and learn the mannerisms of the different sisters so as to decide with whom to start, how to group them and, finally, how to bring them all together without letting them get out of control Harry says that it was necessary to make the children like him and understand that whatever they did was to please him so that he would think well of them.

Harry says that the quintuplets are exceptionally bright, and that Marie, the small one, is the devil of the outfit "Last June we set up a chute so as to catch them playing on it and sliding down,' he said "Marie was the first one to take the chance The others watched cautiously and in about fifteen minutes they followed suit Dr Defoe is a grand man and a typical country doctor"

Harry is on the go from city to city, photographing sports for the "realism reel' for Pathe He says that sports are all the same after a while but that the quintuplets will always be the one subject which can never be duplicated

News Picture Awards

● With the conclusion of the Fifth Annual News Picture Competition conducted by *Editor & Publisher*, another prize winning record has been achieved by Graflex and Speed Graphic American made cameras In the competition which ended recently, four out of the five prize winning pictures were made with these cameras The fifth was made with a Fairchild Aerial camera In addition, all of the pictures receiving Honorable Mention were made with Graflex or Speed Graphic cameras

By making four out of the five prize winning pictures in the 1940 competition —and grand slams in the 1936 1937, 1938 and 1939 contests—these cameras have the unusual distinction of having made *thirty-nine of the forty* prize winning pictures since the competitions were inaugurated

Low-Reflection Lens

● A new type of motion picture projector lens which reduces light reflection losses, and thereby increases the amount of light projected on the screen, was explained and demonstrated to the Atlantic Coast Section of the Society of Motion Picture Engineers last month by Prof C H Cartwright, of the Massachusetts Institute of Technology

Dr Cartwright's researches in the treatment of lenses with low reflection homogeneous film are well known In a laboratory demonstration he showed the engineers the exent to which the light transmission efficiency of lenses may be increased by treating it with the film he has developed

The demonstration showed the difference between the new film treated lens and a standard projection lens Two matched films of the same subject were projected simultaneously, upon a single screen by two projectors one equipped with a treated lens, and other with an untreated lens Half the film will be masked in each projector, and the halves will be matched on the screen, allowing visual comparison of the light transmission of the two lenses

Dr Cartwright's summary of his paper is as follows

"A homogeneous film that reduces reflection to zero for one particular wavelength of light must satisfy two conditions 1) the index of refraction must be equal of the square root of that of the glass and 2) it must have an optical thickness of one-fourth of the wavelength of the incident light

The first condition is difficult to fulfill exactly because it requires a film of an abnormally low index of refraction Even when this condition is satisfied only approximately, however, a marked decrease in the reflection from glass is possible The second requirement is of paramount importance Although it may be fulfilled exactly for only one wavelength, the reflectance is greatly reduced throughout the spectral range used for most visual and photographic purposes These two conditions can be satisfied rather well by evaporated films of the metallic fluorides deposited on glass in vacuum

"Although each air glass surface of an optical system reflects only about five per cent there are enough surfaces in a camera lens or projecting lens so that the transmission of light is noticeably increased after a lens is treated More striking than the increase in transmission is the improved quality of pictures made with treated lens"

TELEVISION



Scene at Don Lee Television Studio Nelson C McEduard member of Local 659 IATSE who is one of the regular television camera operators is shown seated at left with actor Reginald Denny

By DUSTER EVANS

AN EVENT of major importance in the television field is the announcement that the First International Television Convention will be held in Los Angeles June 19 to 22 inclusive Having a firm belief that Los Angeles and Hollywood are destined to be the number one television spots of the country a local enthusiast has interested a number of leading television engineers and artists in the project

The Convention will be held at the Hotel Biltmore which has handled the majority of important conventions held in Los Angeles Ample space for exhibitions of equipment will be available

Sponsors of the Convention are the Television Institute of America Inc the Television Artists and Writers Guild Inc and the Hollywood Television Society Technical papers and a wide variety of subjects will be presented and demonstrations made of modern television and facsimile equipment As Los Angeles is the home of the West s only telecasting station it is the number one television spot of the country, with talent technicians and climate (for out of door spots)

Hollywood, the capitol of movietom, will be hosts to Convention delegates. The date June 19 to 22 is convenient for those planning a summer vacation trip

Cooperation from W6XAO of the Don Lee Broadcasting System of which Thomas S Lee is president, is expected and prominent delegates to the Convention will probably appear before the station s television camera during the Convention

The value of television to the educational field will be covered and a special committee to arrange programs for both teachers and children has been appointed with Paul F Devine Science Supervisor of the Los Angeles Board of Education as Chairman Leading television equipment manufacturers are expected to be present to represent their concerns and present exhibitions of the latest advances in television technique From 300 to 500 delegates are expected

Details of the Convention are being worked out by George H Seward who has been active in television organization matters for the past eight years He founded and is the President of the Hollywood Television Society and has recently incorporated the Television Engineers' Institute of America and the Television Artists and Writers Guild

Seward became interested in television *from his earlier days in amateur radio* He was a licensee and operator of amateur Station W6CTT, which was on the air for a period of five years in Hollywood giving code instruction for young aspirants for licenses from the Federal government Television and radio have been a hobby with Seward for the past decade His interest in these fields probably is due to his early scientific training He graduated from the Sheffield Scientific School of Yale University in 1895 and came to California in 1910 His loyal devotion in the development of this field has been a constant inspiration to young men and his plans for this Television Convention are being looked forward to with great anticipation

● In a few months Thomas S Lee young *Los Angeles executive will load* several pieces of electrical equipment on a truck and haul them to the highest accessible mountain site above Hollywood Eight years ago, when he began tinkering with television critical observers predicted that some day he would give up in disgust and have the weird junk carted away

But this year s move will be one of progress rather than retrogression for Lee last month was granted authority by the Federal Communications Commission to move his W6XAO to the mountain top and to telecast on the first choice wave frequencies 44 to 50 megacycles For nearly eight years his synchronized pictures and sound have sped over the southern California air

(Continued on Page 20)

Because of a number of recent important developments in the Television field that department is being given more space in this issue Straus in the mind indicating possible early expansion of this entertainment medium are 1) The Federal Communications Commission has adopted rules for television permitting limited commercial operations starting in September 2) Preliminary surveys for paving the highway to Mt Lee, site of Thomas Lee s television station W6XAO are being rushed to completion now 3) A special representative of the FCC recently inspected local television facilities

The accompanying articles give detailed news about current activity in this much-discussed long-awaited entertainment form

—EDITOR S NOTE.



TRI-X PANCHROMATIC

SOLVES THE SPEED-QUALITY PROBLEM

SPEED alone is not enough in modern portraiture There must also be depth grada tion modeling fine rendering of flesh tones Tri X Panchromatic gives you speed plus these qualities The unretouched illustration above is from an 8 x 10 negative, made with 14 inch Ektar lens *f* 16 1/75 second, with front illumination of only two No 1 Photo-floods Eastman Kodak Company, Rochester, N Y

TRI-X PANCHROMATIC

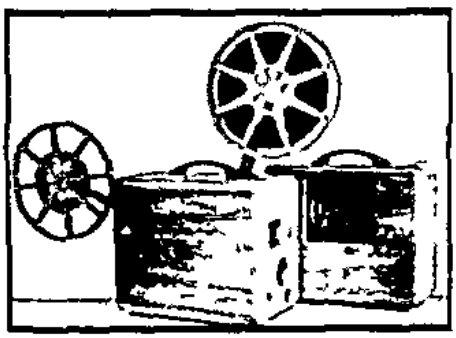
FOR EXTREME SPEED PLUS QUALITY

TRADEWINDS

Home Sound Projector

● Bell & Howell announce a new Filmo sound Projector moderately priced and designed especially to bring talking movies into the home

The projector unit is fundamentally the same as that of the "Academy" Filmosound the model which has had such wide acceptance in schools throughout the country A 750-watt lamp furnishes brilliant illumination and—very important to the



home movie maker—the new Filmosound will project the silent 16mm movies made at home, as well as sound films

That there is ample material for the home sound projectors is indicated by the example of the Filmosound Library, which alone contains more than 3300 reels of sound films—Hollywood features starring current favorites—cartoons—travelogues—news reels—sport shorts—and dozens of other subjects all of them available at moderate rentals This film library has several branches located at strategic points throughout the country

In addition to the library films now available for home use, many large industrial organizations have made extremely interesting sound films most of which are available on request at no charge whatsoever

Single Frame Memo Cameras

● Two new models of the Agfa Memo Camera which have just been announced will be of interest to photographers preferring the 35mm 'single frame' picture size Each of the two new cameras employs the same general construction features of the Agfa Memo camera introduced last year but the aperture and film advancing mechanism are designed to give 18 exposures 18x24mm (approximately ¾x1 inch) with a Memo film cartridge

Educators and others who take 35mm pictures for projection will be especially interested in these single frame cameras since positive projection strips can be inexpensively made direct from the original negative

Diffusion Effects

● Diffusion is the fine art of softening the image on the film To do so without sacrificing fine details and lens speed is a difficult job according to George H Scheibe, originator of filter effects who reports that many pictures now are diffused in their entirety with Scheibe's diffusing screens

Specifically mentioned as examples of this technique were "The Invisible Man Returns" "House of the Seven Gables" and 'Oh Johnny" Among the cameramen using and recommending his screens Scheibe says are Milton R Krasner and Joseph A Valentine A variable diffusing screen is being used by Valentine throughout all his pictures, it is stated The screen is slid into place to produce the desired degree of diffusion, which is quickly attained in this manner

Lenses Pass Stiff Tests

● With the introduction of the new Baltar Lens for professional motion picture photography, Bausch & Lomb designers have succeeded in working out a series of corrections to meet the peculiar requirements of Hollywood technicians Tests of this lens on full length features indicate that the optical correction embodied in the design affords exceptional covering power, depth, brilliance, and the roundness desired

Like all lenses, the Baltar design utilizes such variables as glass properties, curves, lens thicknesses and spacing to attain the correction desired The compromises worked out have been done without regard to complexity or cost and the endeavor to secure speed with good covering power beautiful balancing of aberrations and simplicity of construction is invariably costly The correction for color photography in the Baltar is excellent since the increased amount of light that the lens passes gives needed illumination at the edges of the field The falling off in illumination at the edges of the field is usually apparent in a darkening of the image

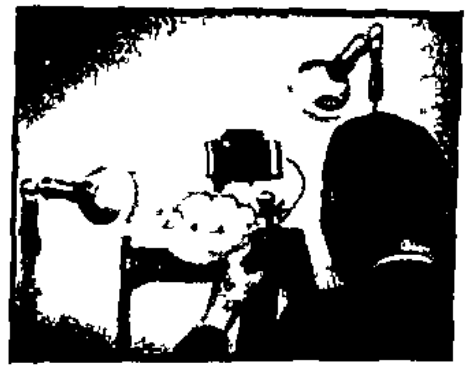
Twentieth Century Fox Paramount, and Universal studios now using Baltars have made commendatory reports which indicate that the lens achieves the designers purpose

Baltar Lenses are made in eight focal lengths 25 30 35 40 50 75 100 and 152 millimeters The speed is f 2 3 except in the 152mm which is f 2 7 All are mounted in barrels provided with an iris which closes completely with the exception of the 25mm and 30mm lenses which close to f 16

Photoflood Improvement

● And now a self reflecting photoflood lamp *with a black neck* This new refinement applied to the 500 watt Mazda photoflood lamp R2 a revolutionary light source introduced last year was announced last month by General Electric

The black opaque coating, on the outside and extending for two inches from the lamp's base to a point beyond the lamp's interior aluminum reflecting surface, is



designed to prevent stray light from escaping

The new black neck feature was developed in response to unforeseen uses to which professional and amateur photographers have been putting the R2 lamp One and sometimes two GE R2 photofloods are often used—as shown in this photo of a studio set up—with the flood source or sources, very near and just ahead of the camera

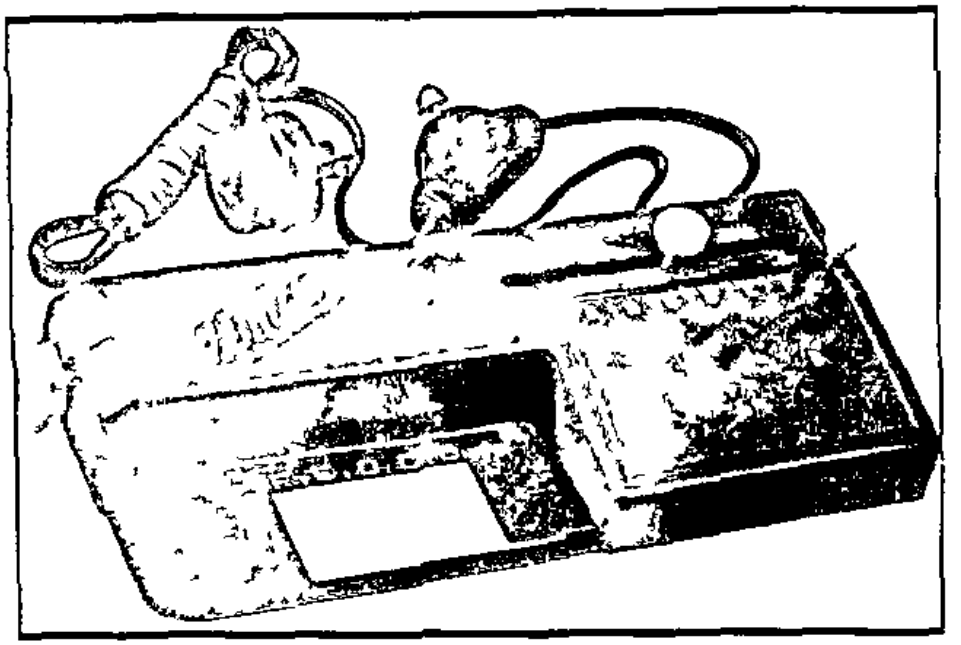
In cases of this kind the opaque coating prevents stray light from spilling backward through the lamp's neck and into the camera lens

Record Perambulator Scene

● A camera followed a team of twenty mules four miles reloading with film every mile last month for the longest continuous perambulator" or moving scene, in the history of the motion picture industry

This occurred at Death Valley, where Wallace Beery and MGM's Twenty Mule Team company are working on location in the lowest below sea level spot in North America

The cameras, on cars with special wheels to negotiate the desert sands proceeded ahead of the borax team drawn by the mules At one side out of camera range, was a 'dark room' car with an improvised dark room in which film magazines could be loaded and kept from the intense desert light Each magazine carried the camera for a mile, when another was loaded into the camera



Enlarging Simplified

● Timit is the trade name for a combination enlarging exposure meter and automatic exposure switch announced by Burke and James of 223-225 West Madison Street Chicago The device times the exposure times the test strip operates the enlarger light and is automatic in operation

In addition to providing a test strip indicating the correct exposure Timit also a time switch for the operation of the enlarger when making the exposure for the final print Once the instrument is set for the indicated time, print after print may be made in the dark with the assurance that every print is receiving the exact exposure as indicated in the original test strip, it is announced The price is $12 50

Iconovisor To Marks and Fuller

● Marks & Fuller, Inc., photographic distributors of Rochester, New York, have been appointed exclusive distributors for the new DeHaven Iconovisor Automatic Filmstrip Projector

The Iconovisor was designed and developed by T V DeHaven a former engineer for General Electric and RCA, and who now holds all patents and manufacturing rights thereof

Sound slide film equipment has already been recognized as an excellent medium for sales training and promotion and is increasingly being used by progressive executives. The DeHaven Automatic Iconovisor will now project these films with or without operator and is opening up many new fields for filmstrip activities

Reasons For Diagonal Splice

● With new film splicers constantly coming on the market, all of them making the straight splice, inquiries have been made as to why Bell & Howell adheres to the diagonal juncture, which is said to be exclusive to Filmo splicing equipment.

It is interesting then, to receive the following explanatory statement from Bell & Howell

"It is not an accident, nor just to be different that Filmo splicers weld the film diagonally Away back at the beginning B&H engineers set out to find the most satisfactory way of fastening one piece of film to another After much experimenting, during which the straight splice, too, was thoroughly tested and tried, the diagonal type was decided upon for the following laboratory proved reasons

1 The diagonal splice is longer than the straight splice, and since the bonding area is therefore greater, the diagonal juncture is stronger

2 There is less tension on the diagonal splice as the film moves through the loop formations than on the straight splice The straight splice gets the strain all at once, while the diagonal takes it gradually as it curves over the loop

3 The diagonal splice is less noticeable on the screen

4 This point, we admit, is an "accident" No one could know about sound on film when the diagonal splice was in the laboratory testing ground But with the advent of the sound track on the film, the diagonal joint comes up with another advantage over the straight.

When a straight splice comes along in sound film, the speaker says "bloop"—just like that And it is often necessary to paint out in a diagonal fashion a section of the sound track before and after the straight splice in order to reduce this jarring "bloop" sound When a diagonal splice passes the scanning beam, the width of the sound track becomes narrower and narrower, gradually decreasing the sound coming from this portion of the track Meanwhile the sound from the track in the subsequent scene increases

In view of these points of superiority, we have every reason to continue the use of the diagonal method of splicing film"

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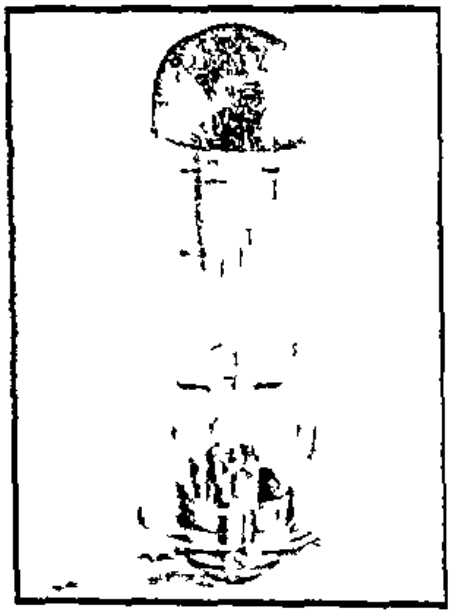
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Black-Top Projection Lamp

● No more need the customary metal lamp-cap be used atop the lamps supplied by the Bell & Howell Company for Filmo Projectors. Instead, these new B&H projection lamps are coated with opaque black at the top of the glass. This black top is said



to reduce greatly the light filtering through the top of the lamphouse and of course it eliminates the necessity of shifting the metal cap from a burned out lamp to a new one.

The black top lamp will retain the well known alignment locating ring which has been a feature of B&H projection lamps for many years. This ring which is fitted by a recently perfected precision brazing machine to each individual lamp is said to assure correct positioning of the filament to give maximum illumination. Thus it is claimed no adjustments of the projector's optical system are necessary when lamps are changed.

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FACTORY METHODS

(Continued from Page 11)

Enough for specific problems. It is assumed that those mentioned will impress the technician with their possible existence. The result of a great deal of meditation on the subject was as follows. It was decided that wherever possible the effects would be originals. That is instead of attempting to print a blend into the lavender raw stock from a positive matt with its inherent deficiency of blend, the mechanics of the wipe would be photographed directly on the lavender stock. For intricate designs that could not conveniently be originals a hard line matt would be photographed in an optical head using the focus for the blend. As for wash effects these would be a combination of a lap dissolve and a semi-transparent matt. A very descriptive name for these would be Directional Dissolves.

Now we come to the object of the article. The machine that was built for the purpose of solving the previously discussed problems. The machine which is actually an optical printer with a few extra gadgets is a product of the efforts of the writer and his business associate J. W. Fitts. It reminds one of the perpetual motion machine that was constructed by the student of theosophy in the Philosophers Stone. When it was contained in a cigar box it lacked one gear of being ready to function. When it had outgrown the house it still was short one gear. No matter what is added it still suggests the addition of something else.

Used as a straight optical the machine would function on the ordinary things such as enlargements, reductions, wipes, laps, etc. quite efficiently. The dissolving and wiping mechanism are set for a start mark and become effective at a given count or they may be thrown in or out at the will of the operator. The dissolving shutter incidentally is in the optical head instead of the camera head and if desired will fade in and out at intervals of *10 feet all day* provided of course the machine itself will hold together that long. The wiping device is only semi-automatic needing to be set at the beginning of each wipe but making both halves of a wipe before needing to be reset.

There are three optical systems. One is a set lens in the camera head for making mechanical wipes. The second is an extended lens for photographing hard matts in the optical head and the third is a free lens working independently on the slide bars for straight optical use.

If desired the optical head may be used as a straight printer in which case the lens system and wiping device are removed from the slide bars and take up flange clamped in their place to take up the second film. The shutter is provided with nine definite light variations and provisions in the lamp house for filters make the combinations possible practically endless.

While the machine is intended for operation in red light it is provided with a magazine which permits loading in white light and consequently can be used with panchromatic stock if necessary. A small green light concentrated on the counter would keep the operator sufficiently informed as to where he was and what he should be doing.

The immediate advantage of having the dissolving and wiping arrangements independent of the camera head besides allowing the optical head to function as a printer is that the simple replacement of the camera head with a 16mm camera makes all the special features of the machine available for the 16mm. In this particular field it is the intention of the writer to not only supply the amateur or commercial laboratory with effects but with prepared stocks the simple printing and duping of which will produce a variety of special effects such as split screen, binoculars, keyhole, disappearing characters, etc. This would free this group from the necessity of maintaining optical printers and operators or from the need of having the effects made on 35mm and reduced.

Needless to say these pre-made effects would be a great deal cheaper than the present practice. One large saving would be in the cost of lavenders. Present practice with a number of studios is to print the whole scene regardless of length rather than risk scratching the negative by unloading. With tailor made effects the lavender would run out 5 feet after the end of the effect so even though they still felt it necessary to run the negative out they would be saving at least two cent a foot for the balance of the scene. Under ordinary conditions the entire amount of lavender used would be 10 feet per scene one-half of which would be leader. Scenes that are consistently charged for at the rate of a matt shot or $250.00 could conceivably be done on $10.00 worth of prepared stock with the use of a precision camera as a printer.

In this article I have described to you an optical printer which you might say necessity built. In the near future, if my ambition does not fail me and if the editor is willing and if I can get past that terrible opening paragraph I will describe to you an optical printer that I would like to build. The kind of a printer in my opinion that should be built to end the building of optical printers. There is of course such a thing as asking too much. They should not be expected to wash and wipe dishes but a shaving device would surely come in handy sometimes.

Coating Speeds Lenses

● The first commercial application of a special film coating to increase the light transmission of lenses has just been completed with the delivery of new projection lenses to twenty five Loew theatres in the larger cities Lester B Isaac, Director of Projection and Sound for Loew's Theatres, ordered the new lenses for the first showing of 'Gone With the Wind," after exhaustive tests by Bausch & Lomb had disclosed that screen illumination could be stepped up from 15 percent to 30 percent depending upon the type and focal length of the lens used

Marked improvement in image contrast and sharpness of focus has been reported by Rochester projectionists who have been testing the new lenses

Officials of Bausch & Lomb said that the new lenses have been made available in advance of their scheduled date of introduction in order to aid Loew's in securing greater screen brilliancy for the technicolor production of 'Gone With the Wind"

Bausch & Lomb combines two processes in its method of producing non reflecting lens surfaces both having the same effect but differing in principle While the inner glass air surfaces are coated with a metallic flouride, the outer surface is subjected to a corrosive process in which oxides of high refractive index are removed from the surface leaving a thin structure of silica

In each case the coating is held to a thickness of a quarter of a wavelength of light Since both the film and the lens reflect light it is necessary that the crests of the waves from one beam shall fall into the troughs of the other Thus being out of phase the waves neutralize each other and reflection is eliminated The missing radiation reappears in the transmitted beam which may contain as much as 99 6 per cent of the original radiation

When a beam of light falls perpendicularly upon a glass air surface from four to five per cent of the light is lost by reflection at each surface, the precise amount depending upon the color of the light and the type of glass used A crown glass air surface reflects about four per cent of incident light, whereas a flint glass air surface reflects six per cent The transmission in the first glass is 92 per cent, in the second 68 per cent The Bausch & Lomb Super Cinephor with its high aperture and the new glasses developed for its several elements will have its light transmission increased by approximately forty percent, something of a revolutionary factor in projection optics

Officials of the company stated that the new processes would eventually be applied to a number of instruments but that present production plans would be limited to a few in which complex lens systems promise a great increase in light transmission by the reduction of reflection

Eyes Sparkle TOO Much

● Hollywood experts, who usually fret over putting sparkle into the eyes of the pretty movie girls, spent several anxious days worrying over how to take the glow *out* of the orbs of a prospective star to be

Dorris Bowdon the Louisiana State university co ed who came to Hollywood more than a year ago, plays a poor dust bowl refugee in John Steinbeck's 'The Grapes of Wrath" which 20th Century Fox recently filmed As Rosasharn, many of her scenes are tragic

Miss Bowdon's eyes glittered entirely too much before the camera, though, and some of her scenes had to be re shot Experts tried using liquid applications without luck Solution for 'blacking out' the sparkle was in throwing a dark blue light directly into them The dark blue light is more intense than the white spots that are used to light her face and counteracts any reflection

War Hits Liner Shots

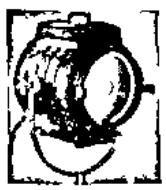
● Scenes of MGM's 'Susan and God' which are required to show a French liner docking at New York were causing Director George Cukor plenty of grief Originally the film was to show the *Normandie* easing into her berth, but that flagship of the French Line has been tied up since the outbreak of hostilities and virtually no other French luxury liners have been coming into New York harbor



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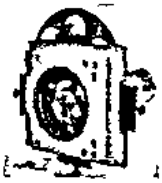
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Silent Partners

(Continued from Page 9)

equipment in machines, lenses screens etc There are cases known where the projection and screen equipment in theatres is so poor that good screen display is impossible

And yet the manager of the house ignores this fact and spends large sums of money on fancy rugs and tapestries for the lobby In many cases, however the fault undoubtedly lies with the operator who through lack of desire to cooperate or because of a misunderstanding of his responsibility fails to note and bring these facts to the proper authority

Fortunately the vast majority of the operators are men who *do* realize their importance and who are willing to accept the responsibility which is theirs alone By cooperation and understanding they constantly strive to keep abreast of the many problems which they alone can master

The ability and responsibility of the cameraman and the motion picture operator are curiously parallel in a reversed sort of way The cameraman takes from the set or landscape a scene of action and by his artistic and mechanical ability transfers it through his lens to thousands of pictures measuring .868" by .631" on a strip of picture negative. His contribution to that scene ends there and after the Laboratory Editing and the various other departments have finished his work is then given into the hands of the hundreds of motion picture operators

It then becomes the operator's duty to reverse the cameraman's efforts and through the medium of his mechanical and optical arrangement coupled with artistic understanding transfer the same tiny picture, magnified at least 5 000 times, back to the set or landscape which is more commonly known as the screen—which is the final result that is viewed by millions of theatre goers throughout the world for their enjoyment

Does it not then become apparent that these two great factors in the motion picture world should strive for a closer cooperation and better partnership in order that they may benefit each other in solving the innumerable problems with which they are continually confronted and so that they both may better serve the great industry which they represent as well as the vast army of theatre patrons who are and always will be, the judges who will bestow the final reward of merit?

Now for the four other component parts

Second Sound department as a whole

(a) The Mixer, working on the set with the Director and Photographer and in the same category, the boom man handling

that ever important mike' (b) the recorder who is responsible for the correct recording of sound on film

Third the film editor or cutter (a) the picture editor who handles the direct continuity of the picture and story, (b) the music editor who handles all incidental and background music, (c) the re recording and dubbing or the sound effects editor, who puts in the background effects (usually the final stage) before the print is turned over to the laboratory for a preview print It is the opinion of the writer that the projectionist who has charge of the dubbing department Booth of any studio has without doubt the most nerve wracking job projectionists are required to do As in the case of the dubbing room of the Columbia studio, under the supervision of Howard Edgar and presided over by Sam Shapiro and C F Richards of Local No 165 these boys have five dummies and a projection machine to handle when running at full capacity This is one spot in the studio where absolute cooperation between the projectionists and other branches of the industry is demanded and received

Fourth, the Laboratory, (a) developing the original negative (both picture and sound track), printing and developing the positive prints for the cutter, the final printing and developing of the positive prints for the finished product The print is now ready for the public to see and all the work of the above technicians is turned over to the next and final stage of production

Fifth the Projectionist (a) Studio, (b) Theatre

This may seem a long and arduous route to take the reader over to the final summing up but it has made clear the necessity for close cooperation between the director of photography and the projectionist The first and last parts of the whole can either make or ruin the work of all of the other technicians mentioned

Just who is this all important being the projectionist and how does he fit so vitally into the picture industry Let s go back for a brief glimpse to the very beginning of this story The cinematographer photographs a scene that is sent to the laboratory Directly a positive print is made of the aforementioned scene and it is then run through the laboratory projection machine which is the first check for flaws of all sorts Then the print is sent to the editorial department where it is run in another projection room for the production editor the director and photographer for mistakes in action lighting dialogue and sound

From this point on this particular scene will be run through a projection machine at least once a day and sometimes it will be necessary for an editor to run it fifteen to twenty times consecutively to cut a fast action scene It then is sent to the dubbing room for final effects and then is ready for delivery to the theatre projectionist who will present it to the paying public

It is readily seen that all departments depend on the projectionist to check up on the work they have done so to this point the projectionist obviously is a personage But why stop here? Let us go on to that other projectionist in the theatre

The theatre projectionist is generally speaking a blood brother of the studio projectionist but still the technique is different In the theatre there are a number of things under the care of the projectionist that do not apply to the studio projection set For instance in the theatre projection room there are usually dimmers curtain controls motor generators sound systems mechanical repairs and maintenance, building up and tearing down of shows curtain and sound cues house lighting building up the trailers and the ensuing day's strips spot lighting for stage presentations and effect machines In the usual neighborhood theatre the projectionist is on his own, on his shoulders rests the responsibility of seeing the show through

It is quite true that most of the modern equipment is automatic in its action, but the incoming voltage will vary this or that vacuum tube will weaken from age the film will need attention from wear the carbon that was just installed in the lamp house is a trifle smaller or was not compressed as hard as the one before it, causing a slight change in resistance and a slight change in the light quality Should a print be delivered to the projection room with two reels of the same scenery, yet with different density of light due to uneven laboratory work, it is up to the projectionist to devise some way to overcome this difference The audience only knows that they paid to see a perfect picture and if that is not forthcoming well? They do not know the laboratory left in that way or that perhaps the printer did not use enough light All the audience knows is that the picture was dull and uninteresting They also saw the name of the photographer on the credit title and they know that there is a man in the little room up near the ceiling who is putting the picture out of a little hole in the wall If it doesn t get on the screen correctly someone is to blame be it photographer or projectionist

So if there is any group of men that should get together and be of mutual assistance to each other it is the Photographer and the Projectionist They can make or break almost any production on which the studios have spent hundreds of thousands of dollars or they can materially assist in saving a so called stinkeroo Many poor stories have been saved by beautiful photography and perfect projection These two crafts should walk hand in hand in all their endeavors

PATENTS

By ROBERT W. FULWIDER

No 2 188 019—Apparatus for Copying Lenticular Films By Projection *Anne Henri Jacques de Lassus St Genies*, Versailles France Appln Nov 1, 1937 In France Nov 5 1936 5 claims

An apparatus for copying a lenticular photograph onto a copy film having non parallel lenticulations

No 2 188 325 — Color Photography *Eastman A Weaver*, assignor to Comstock & Wescott, Inc, Cambridge Mass Appln Mar 17 1936 4 claims

A method of correcting a color film having improper color balance, by making corrected records having differing contrasts

No 2 189 657—Film Fire Quenching and Minimizing Apparatus *Geo W Hanlon* Darby Pa Appln Nov 8 1937 10 claims

A device for extinguishing motion picture film fires by moving fire pads against the film and slitting the perforations along the length of the film by means of knives in the fire pads

No 2 187 983—Means for Extinguishing Burning Motion Picture Films *Joseph J Sherwood* and *Frank A Pentland* St Louis Mo Appln May 29 1939 12 claims

A motion picture projector in which a non combustible strip is wound in with the film so that in case of fire the non combustible strip will be wrapped around the film and put the fire out

No 2 188 764—Camera *Thomas J Walsh*, assignor to Thomas J Walsh and Giovanni B Antoflli a copartnership doing business as National Cine Laboratories, N Y Appln Apr 8 1938 5 claims

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A camera with a lens turret having detents to hold the lenses in proper alignment with the aperture and having a filter slideway in back of the lenses

No 2 189,297—DIAPHRAGM FOR PREVENTING DOMINANTS ON COLORED PICTURES *Kurt Rantsch* and *Heinz Ret.laff* Germany, assignors to Opticolor Aktiengesellschaft, Glarus Switzerland Application Feb 23, 1937 In Germany Feb 28 1936 3 claims

A diaphragm for use in lenticular film systems consisting of a member having one edge close to one color band of the color filter, and extending in a plane at right angles to the plane of the filter

No 2,189,298—OPTICAL SYSTEM *Kurt Rantsch* Germany, assignor to Opticolor Aktiengesellschaft, Glarus Switzerland Application April 1 1937 In Germany April 9 1936 1 claim

An optical system for lenticular films, having an afocal lens system a plural zone color filter and a beam splitter composed of as many rhombic prisms as there are zones in the color filter

No 2 189 374—APPARATUS FOR FORMING THREE DIMENSIONAL IMAGES. *Leighton Homer Surbeck* N Y Application May 17 1937 7 claims

A projection screen designed to be moved across the light axis, and consisting of a plurality of closely spaced reflecting elements

No 2 189 500—MOTION PICTURE CAMERA. *Paul Heinisch*, Germany, assignor to Askania Werke A G Application Dec 16, 1937 In Germany Dec 17 1936 2 claims

A motion picture camera having a perforated wall arranged adjacent to the path of the film from the reels to the feeding means and a corrugated pliable sound absorbing member guiding the film

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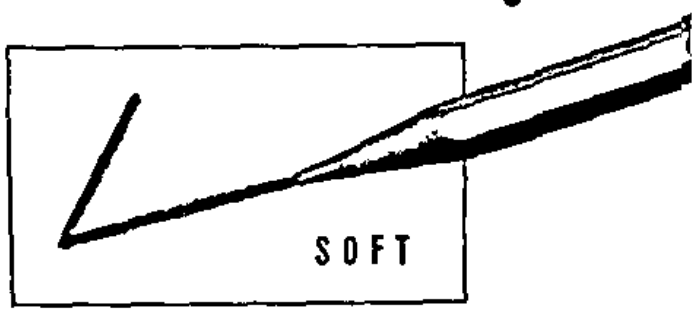
HOLLYWOOD CALIFORNIA

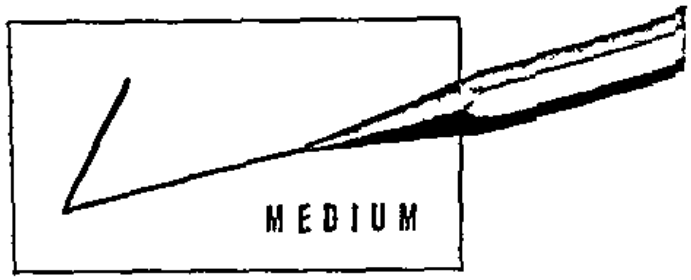
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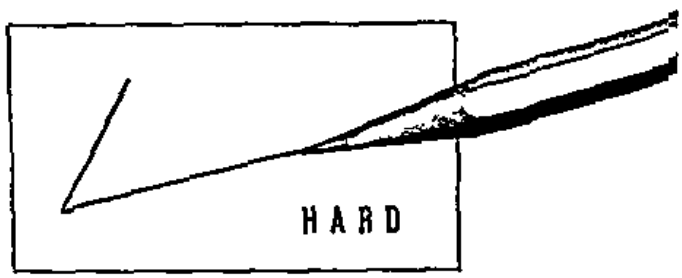
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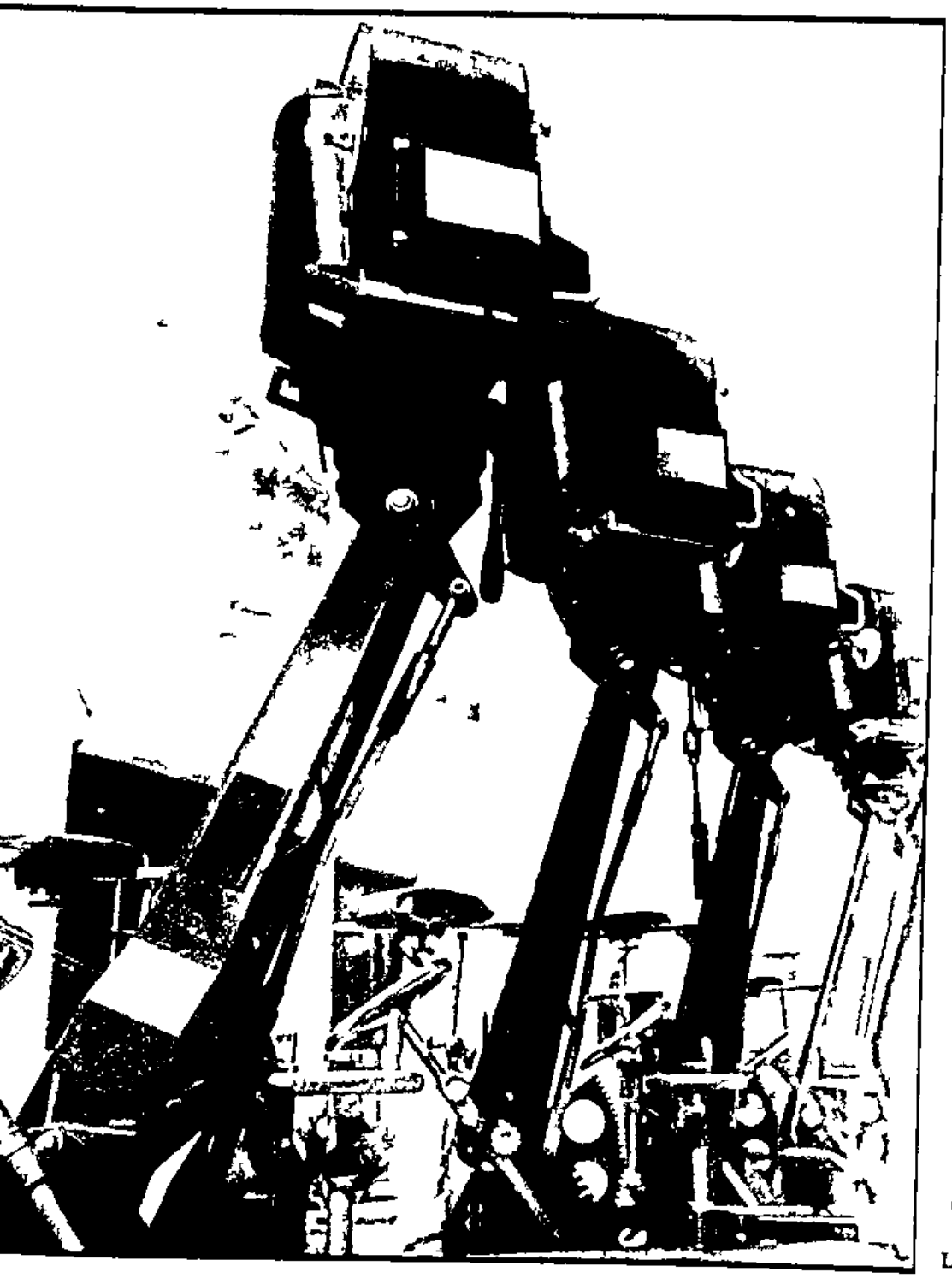
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Vol. XII May, 1940 No. 4

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On the Cover

Cameras had the tables turned on themselves when they became the object of this lens study by Bert Longworth, member of Local 659 IATSE These are the well known BNC model Mitchell silent cameras which were perfected in 1934 to meet requirements of sound picture production In this arresting composition they assume the appearance of robots poised for action in a machine age

Editor, HERBERT ALLER

Art Editor, JOHN CORYDON HILL, *Business Manager*, HELEN BOYCE

Contributing Editors LEWIS W PHYSIOC, FRED WESTERBERG D K ALLISON, GEORGE HURRELL, J N A HAWKINS, PAUL R CRAMER, WILLIAM COMYNS, G M HAINES ROMAN FREULICH, ERNEST BACHRACH ALVIN WYCKOFF WILLIAM V DRAPER

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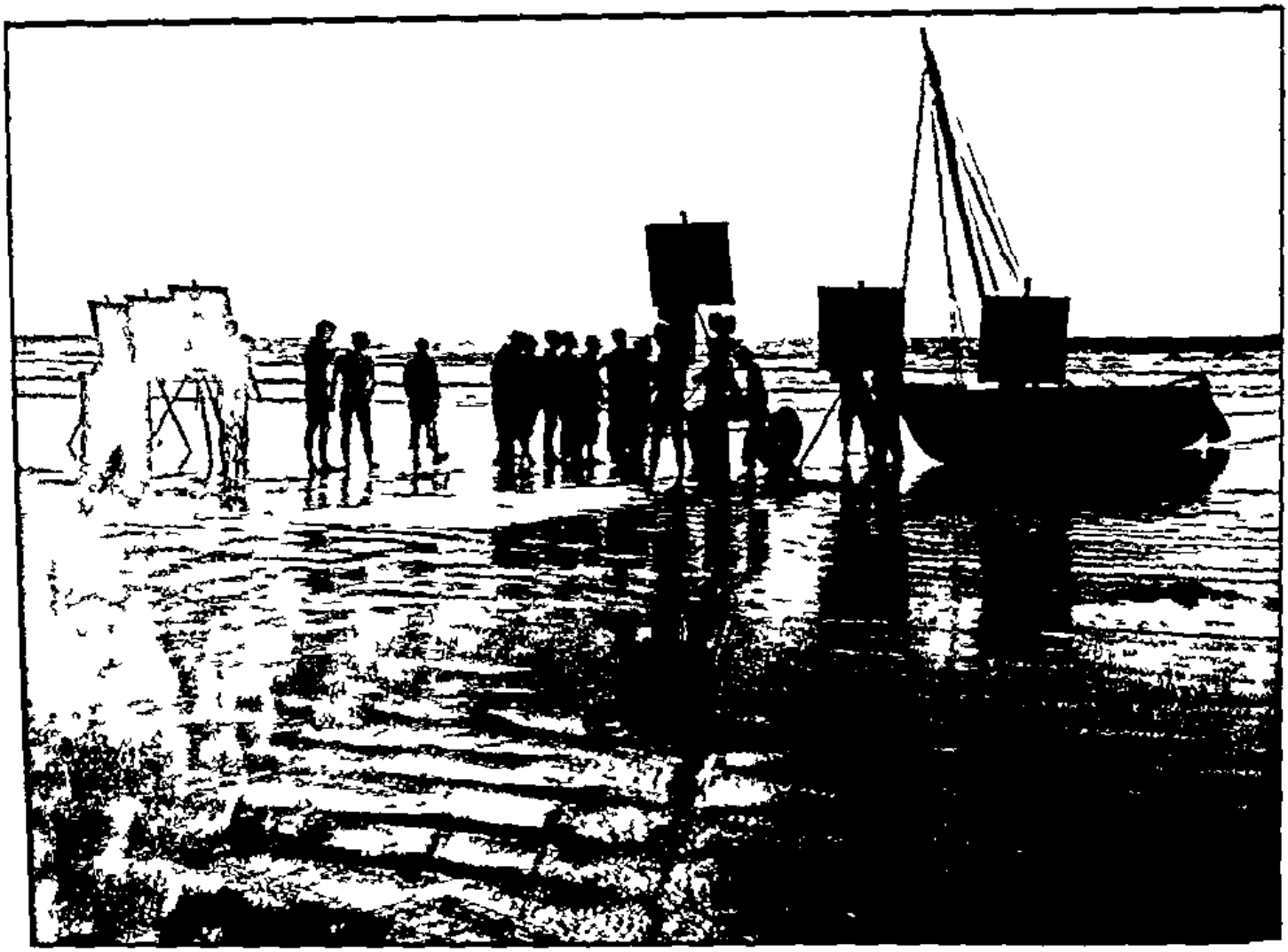
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BROWN-CALDWELL



Silhouette Against the Surf" was shot at Pismo Beach by William Grimes, member of Local 659, IATSE, while on location for the Metro Goldwyn Mayer production, "Strange Cargo." It is an interesting example of how silhouette pictures provide a refreshing change from the more conventional type of photographs. Here the photographer capitalized upon a stretch of beach, a group of people and a beached sloop to secure a "different" picture. They can't be recognized but in the picture, by the camera dolly, are Robert Planck, first cameraman; Robert Bronner, second, and Harkness Smith, assistant. "Strange Cargo" stars Clark Gable and Joan Crawford.

PEORIA BOY MAKES GOOD

★ **Eliminating the "bags" under Adolph Menjou's eyes by novel experimentations with tomato can reflectors and mazda lamps started Photographer-Director-Producer Lee Garmes on way to cinematographic fame**

This is the story of a man from Peoria, Illinois, who refuses to be satisfied with success, who believes that you are going backward if you are not moving forward. It is the story of Lee Garmes, for years famous as one of Hollywood's greatest motion picture cameramen, now a producer apparently destined to be as famous in the production field as in the field of photography — and he was an Academy Award Winner as a photographer.

It is difficult to learn much of the past from Garmes, for he feels that the past is ancient history, that what one is doing *now* is all that counts. However, he was born in Peoria, Ill., in 1893. His was an uneventful life until his parents moved to Oakland, California, in 1906, just in time to land them in the midst of the disastrous San Francisco earthquake and fire. The family immediately moved right out of the state, going to Denver, Colorado.

Garmes was always intensely interested in motion pictures, attending every possible picture and reading everything available on the subject. His interest was so intense that in 1915, when he had finished school in Denver, he persuaded his family to move with him to Hollywood, so he could try for a job in films.

Shortly after arriving in Hollywood, young Garmes learned through a friend that a job was open at the Thomas Ince Studios. He dashed out, and after being stalled along for a time, finally got into the studio and talked himself into the job as property boy and all around handyman. Garmes was quick to make friends, and soon caught the eye of Cameraman John Leezer who started teaching him the art of photography. When Leezer later moved to another lot to photograph Dorothy Gish and Richard Barthelmess, he took Garmes along as his assistant.

Here Director Elmer Clifton spotted him as directorial material and tried to persuade him to become an assistant director. Garmes finally decided to stick to the camera, and after several years as an assistant cameraman was given the job of first cameraman on a series of Gale Henry 2 reel comedies. Following these he photographed a full length picture with moderate success.

Then came the turn that led Garmes to cinematographic fame, and also brought fame to Director Mal St. Clair and to Adolph Menjou. He was assigned to photograph a film called "The Grand Duchess and the Waiter." The story was considered more or less of a lemon, and Menjou was considered a second rate actor because he had "bags" under his eyes.

Young Garmes started experimenting on eliminating those "bags" with lights, and in so doing became the first cameraman in pictures to use mazda bulbs instead of carbons. He used two mazda bulbs with empty tomato cans for reflectors, and to the amazement of everybody he wiped out the dark splotches the bags had always made on Menjou's face. When he saw that this worked he rigged up a lot more mazda bulbs, hanging them about on the set. The result was that he succeeded in making a picture with a wide range of tone values instead of the sharp blacks and whites of arc lighted pictures.

It can truthfully be said that by introducing the mazda lights in this film Garmes made one of the most important contributions ever developed in the field of motion picture photography.

When "The Grand Duchess and the Waiter" was finished, studio executives thought the lighting too radical, and twice almost shelved the picture. Finally they released it during Christmas week when business was usually slack. To their surprise the film drew capacity crowds and became one of the box office sensations of the year. Garmes, Menjou and St. Clair became famous overnight.

From then on Garmes had the pick of the pictures. He went to France and later to Algiers for Rex Ingram to make the first "Garden of Allah." He followed this with picture after picture in rapid succession and continued experimenting with mazda lights.

In one picture on which the budget for lighting was set at $12,000 Garmes cut the cost to only $3,000 by his home-made mazda light contraptions. When the Academy of Motion Picture Arts and Sciences was formed in 1927, one of the first things the technical division of the Academy did was to advise all cameramen to visit Garmes on the set in order to study his methods of using mazda lights.

Besides pioneering in lighting, Garmes was likewise one of the first cameramen to use panchromatic film. Despite the objections of his directors, Garmes managed to sneak a lot of shots in on the new panchromatic film, and then when the directors commented upon the fine quality of those scenes he would tell them the truth and they would then accept panchromatic film.

In 1932 Garmes reached absolute tops in his photographic profession by being given the Academy Award for his photography on 'Shanghai Express.' Besides this distinction Garmes by then was considered one of the highest paid cameramen in the industry, with a weekly salary reported in the four figure class.

But this man from Peoria wasn't satisfied. He would not rest on his photographic laurels. He wanted to direct pictures, so in 1933 officials at the Fox Studios gave him a contract as a director. This almost turned out to be the ruination of Garmes' career, for on the very day he started his contract the famous cameramen's strike broke in Hollywood. The studio officials suggested that Garmes photograph his own pictures. This he firmly refused to do. For months Garmes came to the studio daily, read story after story, received his weekly check but—was given no directing assignment. Finally Garmes' sincerity and the fact he was in the right was recognized by the studio and he was again back in favor.

However at this point Ben Hecht and Charles McArthur decided to make pictures in New York. They asked David O. Selznick to find them a man who would be both a good cameraman and a director. Selznick who had never met Garmes recommended him. Garmes secured his release from Fox and went to New York. There Garmes photographed, directed, edited and turned out three films, two of which were big boxoffice successes. "Crime Without Passion" and "The Scoundrel."

Meanwhile Garmes had met Alexander Korda and had told him of all the original things he wanted to do in films but which the studio heads were afraid of. So just as Garmes finished his third picture for Hecht and McArthur, Korda cabled him from England to go over with him and do all the things he had talked about. He accepted!

For three and a half years he worked in England as cameraman and director. During this period he helped advance British films by introducing various American techniques. But all was not a bed of roses for ambitious Mr. Garmes. He had an opportunity in England to do "Wings of the Morning," one of the biggest technicolor pictures ever made in England, but had to give it up because of his contract with Hecht and McArthur. They called him back to New York to make a picture but the picture never was made.

And then came a bitter disappointment. Garmes was signed to direct "Pygmalion." At the last minute George Bernard Shaw learned he was not a British subject and refused to let him work on the picture. Garmes was paid for directing the film but spent the time touring Italy and Southern France.

The final act in the British interlude came when Garmes formed his own pro

how time flies

★ If you don't think so, examine the evidence below, resurrected from the archives of "the good old days" in an industry that has forged steadily ahead to ever higher accomplishments, particularly in the photographic field



Twenty years ago this was typical Hollywood movie business. Wallace Reid (upper left) was the Clark Gable of the industry. Selig Studio in Edendale on Glendale Boulevard was a hot spot of activity. It now is completely gone. Note the high top open air studio cars lined up at the curb ready to dash out on location to the wilds of San Fernando Valley a few miles distant. That is where the western troupe (lower left) was photographed. Cameramen will be interested in the Pathe cameras being used which weighed around 70 pounds. Present cameras with their many improvements weigh from 125 to 150 pounds. Feminine allure was exemplified by Geraldine Farrar shown in a scene from one of DeMille's early epics. Thus tempus fugits in double tempo in the motion picture industry. The proof is at hand in a comparison of this page of art with that on the facing page. Move over, Father Time, and get set for even greater changes in the next twenty years.

ducing company in England. He had everything lined up when the bottom dropped out of the British financial market and his prospective backers had to withdraw.

Although Garmes hoped to remain in England permanently, had even bought a home there, he was lured back to Hollywood by an offer to photograph "Gone With the Wind." He returned, lensed the picture for several weeks until a studio shakeup took place which saw a new director, new cameraman and practically entire new technical crew on the film.

Unattached again, he began toying with the idea of becoming an independent producer in Hollywood or New York. He passed the word around that he was looking for finances, a good story and a major release. And almost immediately the story appeared. Garmes met Adele Comandini, one of the most brilliant writers in Hollywood. She had a story called "Beyond Tomorrow," which she had co-authored with another well known writer, Mildred Cram. Garmes liked the story.

Then came a day when a telegram arrived from an eastern executive telling Garmes he had a financial backer practically set. Garmes and Miss Comandini hastily sent script and production plans to New York and a few weeks later received word that RKO would release the picture and that a New York bank would put up the finances.

Success! Here was the unbelievable. Garmes and Miss Comandini who became his associate producer, started lining up their cast. They arranged to make the picture in New York. They signed big players such as Charles Winninger, Harry Carey, C. Aubrey Smith, Richard Carlson,

(Continued on Page 22)

CAMERA CAVALCADE

By
LEON SHAMROY

★ **Two decades of motion picture photographic history are traced from the time when the camera was regarded merely as a necessary evil to its present importance in accenting highlights of script and acting and providing its own dramatic and artistic effects**

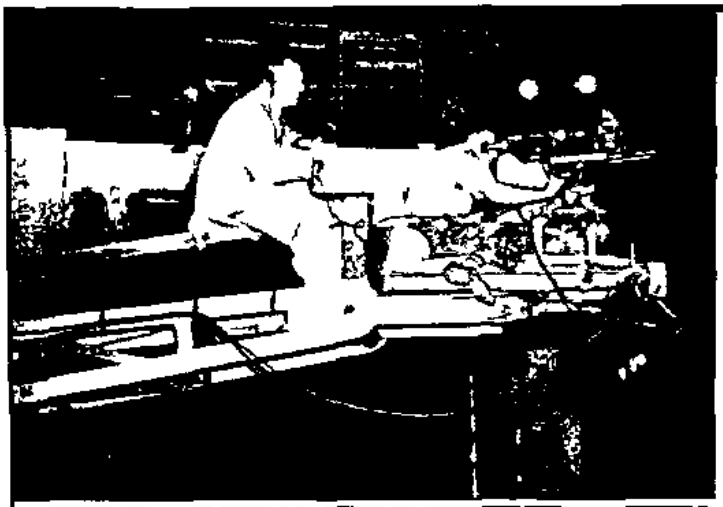
The author is one of Hollywood's top-flight cinematographers and a distinguished veteran in his field He has been "behind the camera on many of the screen's finest productions At present he is in charge of photography on "Lillian Russell among the most important pictures undertaken by 20th Century Fox in years His next assignment will be Four Sons" another major production at the same studio —Editor's Note

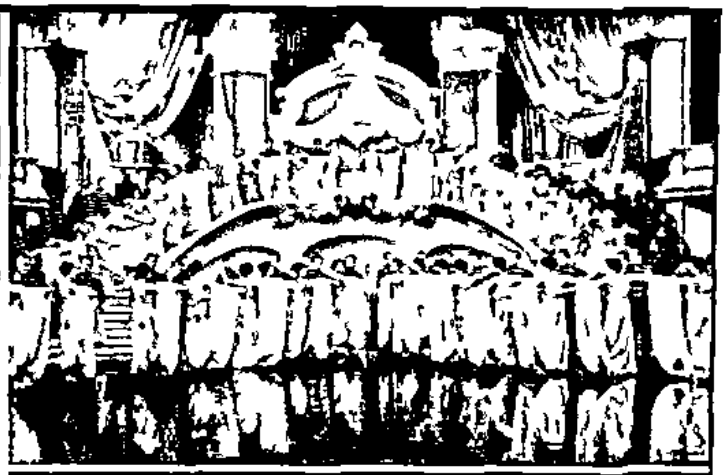
MOTION PICTURE photography has come a long way in the last two decades

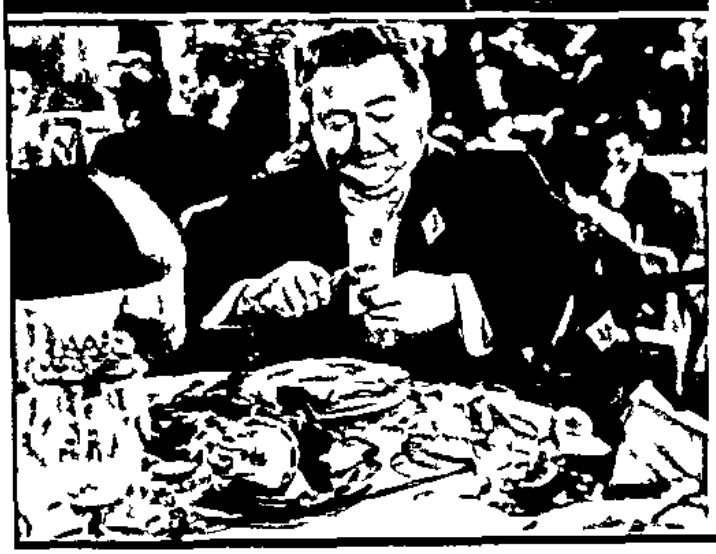
There was a time in the not so-distant past when ability to wear a cap in reverse and turn a camera crank at an even pace were the primary qualifications of a cameraman That fortunately for us all is the case no longer In the first place most of us are too busy scratching our heads for new ideas to wear a cap and second they've taken the crank away from us

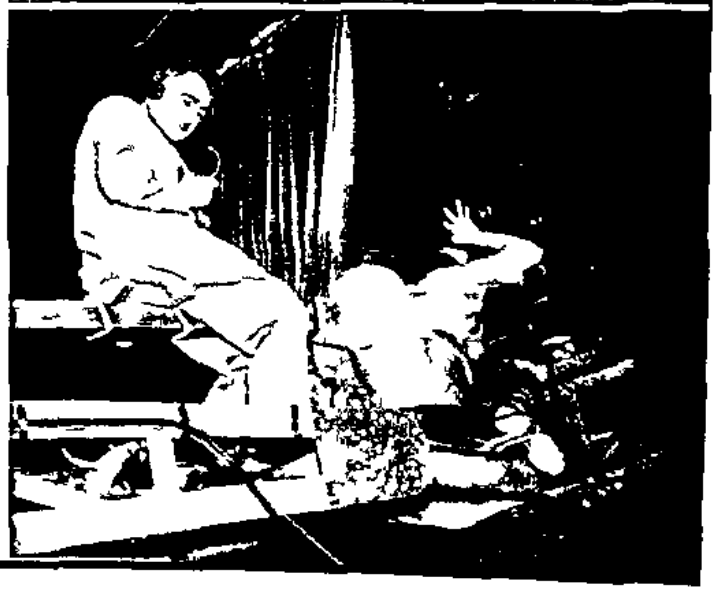
In fact, they've gone so far as to label us directors of photography It's a grandiose title for busy men to wear yet the truth is that the title and the job it attempts to describe are acually not so far apart

For screen photography has become creative—a matter of ingenuity imagination artistry and experimentation The tools we use have been brought to such a high state of perfection that mere mechanical ability in their application no longer means assurance of a job and a roof over the head









The subject of today's movies may be of another era such as 20th Century Fox's production "Lillian Russell" but the photography is as modern as tomorrow Camera equipment and techniques have come a long way in the past twenty years with cameramen riding with greatest of ease through the air on cranes that are mechanical marvels Leon Shamroy author of the article is shown in action directing photography of the production He uses the mouthpiece to issue instructions to operating cameramen Curt Fetters and others on the set Both men, as well as stillman Jack Woods who took their pictures and that of Edward Arnold are members of Local 659 IATSE The dance ensemble shot is by Clifton Waupin also a member

To use them to their maximum dramatic and artistic effect, as a first rate writer uses pencil and paper, is now the problem that keeps us tossing on our couches and counting sheep

Something has been lost in the evolution and something gained. Some of the physical adventure—the element of hazard—has gone out of the business. Photographers no longer are compelled to tie themselves to the undercarriage of a plane to get unusual air shots. They don't have to scale precipitous peaks and dangle over terrifying chasms for the sake of their art. They have other safer but infinitely better ways of getting the same effects today.

As an example of what we had to go through in the early days there was an experience in which I figured while working as a cameraman with Charles 'Hurricane' Hutchison in the making of a thriller. We took to the air for the picture. The plane in which I was working went into a spin and washed out. I landed in the *hospital with my legs broken and my spine* fractured.

When I had recovered sufficiently to receive visitors one of the first to come up was 'Hurricane.' He was raging. He showed me the reason. It was a telegram from the man who had contracted to sell the picture which had so nearly cost me my life as well as the others turned out by Hutch. He told us that the contract would be cancelled if we didn't stop faking our shots and throwing dummies out of planes. I was too sick to say anything but Hutch said enough about the gentleman to do for both of us.

We no longer risk our necks as casually as we once did but there are thrills enough left in the business. There isn't a single cameraman of my acquaintance who doesn't get a terrific mental and spiritual lift from successfully photographing a sequence under conditions seldom tried before or from a little experiment in lighting which is out of the routine.

They're adventures these things and they bring a deep and lasting satisfaction which goes far beyond the momentary pleasure derived from a feat of physical daring.

At the present time I have the job of photographing 'Lillian Russell' in which Alice Faye, Henry Fonda, Don Ameche and Edward Arnold top the cast. Irving Cummings, a veteran of fine sensitivity and acute dramatic sense, is the director.

In the unlamented "good old days" we would have fixed the camera immovably to the floor and ground away. Its actual physical operation would have been the major concern of the cinematographer.

But today it is the lights and the shadows so essential to the proper telling of the story on the screen that take at least 60 per cent of the time. The remainder is taken up in devising camera angles that both highlight the story and give it smoothness and fluency and in outlining the movements of the camera in relation to the players and *their moods*. It is this concern for the imponderables that makes possible such technical and artistic achievements as "The Grapes of Wrath," which John Ford directed and Greg Toland photographed and "Rebecca" which George Barnes so ably handled from a photographic standpoint.

As to the operation of the camera that is left to the assistants the operating staff. Their job too requires expert knowledge and a high degree of ability. That they almost invariably come up to expectations speaks well for the future of film photography, for from the ranks of the operators must come the head cameramen of the *future*.

Since he is no longer required to devote all of his time to the physical operation of the "box" the head cameraman is left free for creative effort in collaboration with the director. The two, in combination can turn out an inspired effort or a dull one as it is through their eyes ultimately, that the public sees the finished product.

A score of years ago, when I first broke into this business as an $18.21 a week laboratory assistant the job was much simpler. The camera was regarded as a necessary evil and the cameraman as not much more. All that was wanted was an objective photographic record. A shadow on the set was regarded as heresy and the idea of moving the camera with and around the players was looked upon as revolutionary.

The scenery was painted on the background and the camera was stationary. It was therefore impossible to get anything less than a full figure shot of the player because if he moved too close to the immovable "box" he'd look like he'd been amputated.

It also worked for amputation of ideas. The photographers held rigidly in a groove by the inflexible camera were stagnating from lack of originality. Things seemed to come too easily to matter much one way or the other in the industry. They were lush days then and the industry was simply mushrooming without plan or thought.

Along about that time however came the first World War to establish a new order of things. As a by product of that conflict, a new and more realistic approach to life made itself felt. A lot of old ideas went into the discard. It was a time of flux.

The movies didn't escape that flood.

D. W. Griffith and his cameraman Billy Bitzer were among the first to jolt the industry out of its lethargy. True pioneers, they turned out such pictures as "The Birth of a Nation" "Intolerance" and "Broken Blossoms" each a milestone in cinematic history. They evolved the first close up and lap dissolve. They were the first to use the cut back and the first to introduce diffused lighting to idealize their players.

Their work was so revolutionary it jarred the film business right down to its collective heels, but more was to come. The theatre, too, was experiencing growing pains reaching adulthood. Gordon Craig and Appia, among others, had already begun their far reaching experiments with lights on the stage. Up to that time, floodlights were the only illumination. They began to use spotlights and domes to create atmosphere and mood through controlled lighting. It was an entirely new idea in theatres and it wasn't altogether lost on the movie makers. Bitzer, working in collaboration with Griffith, and Charles Rosher, a well known British portrait photographer who had taken up motion picture work, were among the first to see the tremendous possibilities offered by the use of backlights and to adopt it for the screen.

But it remained for a few daring Americans and Europeans, at this stage, to knock accepted *photographic conventions* completely into a cocked hat.

They turned out such pictures as "The Four Horsemen of the Apocalypse" "Tol'able David" "The Cabinet of Dr. Caligari" "Passion" "The Last Laugh" 'Metropolis' and 'Variety' to say nothing of 'Intolerance' and 'Broken Blossoms,' and left the movie world gasping. Directors like Griffith, Rex Ingram, Henry King, Murnau, Lubitsch and others of that school had simply discarded the stereotyped and the routine and gone adventuring into psychological fields.

In their hands the camera had ceased to be a fixed and inflexible piece of apparatus to record physical action and the surface emotions leaving the intangibles to subtitles. Instead of merely recording the camera also became an actor. In short, they made it into a mobile and animate instrument expressing itself in delicate nuances and moods through gradations of light and shadow. It became as well a scalpel to lay bare innermost thoughts and feelings by suggestion and implication.

It was a revolution in ideas and technique that set the business on its ears. So startling were these innovations, most of which came from Europe that there was talk among the old line directors and cameramen of boycotting these amazing products from abroad.

But photographers like Bitzer and Rosher, Roy Overbaugh, John Seitz, Henry Cronjager, George Barnes, Hal Mohr and Bert Glennon, among others saw the limit

> *'Were it not for the creative ability of motion picture technicians to use the developments in the fields of acoustics, optics, chemistry, electronics, mechanics and physics, motion pictures would still be in scripts and not on the screen'*
>
> —DARRYL F. ZANUCK,
> Vice-President in charge of
> production at 20th Century Fox.



Modern pl otography requ res artistry and imag nat on in a ld t on to a mastery of the techn cal aspects of the art This is true of st lln en as well as mot on picture ca e amen Cl fton Maup n mem ber of Local 659 IATSE illustrates the point with this series of portra ts sl owing Alice Faye in various per ods of Lillian Russell's career fro n stage-struck kid to the pinnacles of theatr cal fame

ess vi tas opened up by the new subjective se of the camera. They not only were uick to adopt the revolutionary technique ut to perfect and advance it.

Directors like King Vidor and Josef Von ternberg were among the trail blazers in utilizing the camera both to tell the story nd to limn those dark and twisted emoions that often lie beneath the surface. They and their contemporaries even went so far as to attempt to capture thought and deals by subtle indirection in their pic ures. They may not have wholly succeeded, but they did manage to establish new cinematic concepts and to push back those frontiers across which their predecessors had not dared venture.

Their virtuosity and grasp of the new med um was demonstrated in such pictures as "The Crowd," "Salvation Hunters" and Underworld," to name only a few.

Artistically and technically these p ctures and others like them were the first to incorporate all the photographic advances and to show them at their best.

The change however was even more profound than was visible to the casual eye. Now that the limits of the camera had been extended almost boundlessly these men set out to bring motion pictures to their purest form—to dispense altogether with subtitles and to let the pictures themselves tell the story.

Some of hem even dispensed with artificial drama and began to look at life itself for their material.

Robert J. Flaherty in "Nanook of the North" and "Moana of the South Seas" pointed the way. Then came Ernie Schoedsack and Merian Cooper both veterans of the World War with "Grass" and "Chang" to make celluloid history. They did more than introduce remote places and peoples. They also demonstrated the infinite possibilities which lay in simple story telling via the camera.

To these daring adventurers of the spirit, the film industry owes a debt which it will never be able to repay in full. They had made an art form of what had once been considered a novelty. They had also brought motion picture photography to a creative profession.

However the evolution has not stopped. *Like many another in this same business,* I've often sat through a picture which I myself photographed no more than three years ago and shuddered at its camera crudities. That is how fast the pace has become.

The passing years have made the tools we use more sensitive, more delicate and more precise. Film sensitivity is much more acute and laboratory practice can now be depended on to get the best possible results. There are almost no manual operations left in the development of film today. The old rack and drum system of film processing has been discarded for the precise and delicate developing machines of today. These machines, controlled by scientific instruments and highly specialized technicians, make for a result that is fixed and constant.



Leon Shamroy, author of "Camera Cavalcade" is a member of Local 659, IATSE.

In the matter of lighting too the changes have been extraordinary. In the beginning of course we were completely dependent on the sun. If the sun wasn't shining we didn't shoot. Then came the arc lights and after them the Cooper Hewitt lamps. The incandescents made their appearance with the advent of panchromatic film. The incandescents gave us softer and much better tonal values but the lighting was hard to control because it was of a diffused quality.

The arc lamp makers stepped into the breach at about this time with a perfected light which did not sputter and thus interfere with sound recording and which at the same time enabled us to get absolute control of illumination on the set by using these lamps in conjunction with incandescents.

Today oddly enough, the greatest advances in lighting, photography and composition are being recorded by the amateurs. Amateurs, for example are responsible for Kodachrome film. They have gone in for the new and untried with a vengeance. Since they are not hedged about by rules and held within certain limits by the requirements of an entire industry they have ventured to attempt things that we professionals are prevented from trying.

Some of their candid and unrehearsed effects are well worth our study and consideration. No doubt, their daring experiments in the use of lights, film and camera undoubtedly will find their way in the end into the professional's bag of tricks.

Cinematography today demands a great deal more than it did in the past since it has come to involve so much more than a knowledge of optics, physics and chemistry. But the rewards, both spiritual and material are much larger.

Constant study and application is required coupled with ingenuity and resourcefulness. Any bright lad can be taught the physical mechanics of cinematography given the time but that no longer is enough.

To bring a script to life requires more than mere mechanical aptitude today.

INTERNATIONAL PHOTOGRAPHER *for June will carry an article about the Pacific Laboratories of Hollywood known as the most complete 16 mm. plant on the West Coast. Unusual equipment used in the plant will be described by Sterling Barnett, vice president. Watch for this interesting feature about the "little brother" to the 35 mm. film with which studio cameramen and technicians are most generally associated. H. William Allers is general manager of Pacific Laboratories.*

drink is daisy's downfall



Daisy, the pooch in Columbia's Blondie series went on a weeks jag during the filming of 'Blondie On a Budget" affording Harry Osborne full opportunity for getting these unique stills of the spree

Osborne working with the cooperation of Penny Singleton Arthur Lake and Larry "Baby Dumpling Simms not to mention Daisy, made stills of the canine star under ideal still gallery conditions, but on a sound stage

A portable white backing and lights exactly similar to those used in Columbia's portrait gallery made it possible for Osborne to keep a constant set up on the stage He used every free moment to perfect his pictures

The camera used by Osborne was a speed graphic, although Daisy's training makes him an excellent still subject When either Miss Singleton or Lake were free from camera duty they worked with Osborne and the pooch in his portable portrait studio The result is this interesting series of pictures parodying the evils of alcohol, complete with hat gozer and icebag



MONTAGE TRICKS EXPLAINED

THE MONTAGE is not a composite The difference is basic

Composites, as every photographer knows are simply cut outs fitted together with as little line of demarcation as possible The lines are obliterated entirely or merged into a general ground by the use of air brush, hand brush or other similar means

Photo Montages require no scissors The various subjects in a Montage are welded together through the skillful use of light This light is applied with the same control as in making a print Where a dark subject is to be in juxtaposition to brighter tone the light is held back or fanned The whole trick—if trick it be—is to learn various ways to control light with exactness

In plain English Composites are made by joining pictures and "smoothing out the joints mechanically while Photo Montages are made by projecting various pictures and smoothing out the areas of contact with light

On the following pages are presented several fine examples of this technique which adds variety to still photographs They are the work of Buddy Longworth member of Local 659 IATSE

Longworth has worked for Universal and M G M as well as Warner Bros His first job in motion pictures as a still photographer was at Universal where he made pictures of the original production of 'The Hunchback of Notre Dame' His most recent assignment was at Warner Bros for "Women Are Tough Angels,' drama of the lives of airline pilots and hostesses

Longworth began his photographic career with Bakers Art Gallery in Columbus, Ohio in 1910 From there he went to the *Chicago Tribune* where he became one of their outstanding staff photographers In Detroit Michigan he later opened a gallery himself It proved unsuccessful so he gave it up

He then journeyed around the country doing free lance photography for newspapers and magazines working his way gradually westward until he came to Hollywood and Universal He is often requested to lecture before camera clubs and photography societies In 1937 he published a book of his work called "Hold Still Hollywood" He says he has photographed every United States President from Theodore to Franklin Roosevelt



CAMERA—*For this str k ng montage Bert Longworth used t o negatives one a silhouette of a model plane the other of the can era crew. Placed together they were projected on paper*



SOUND—*Tu o negatives again the upper one of the a rplane on groun l s as t ltel l with us sha lo cs across the key neg to give the des re l effect an l accent the angles t tl e latter compos t on*



PROPS—*Three negat ves went into th s fanc ful work the one of plane u th motors running be ng used at eacl side one in center of subject and a n odel prop one of old prop at bottom*



CONTRASTS—*Depicted by Ralph Bellamy (bottom) on the grous d and Dennis Morgan forty thousand feet h gh Tu o nega t ves were used both being projected da k for a better l lend*



REFLECTED LIGHT—*Not a montage but a behind the scenes shot made by Longuorth while on location during filming of the Warner Brothers aviation thriller—"Women Are Tough Angels"*



MIND'S EYE—*Montage of exterior and interior negatives the lower shot being made having in mind the upper one with which it was to be blended in dramatizing expression of a mental image*





CAST—*Wayne Morris Jane Wyman Dennis Morgan and Virginia Bruce photographed against a blown up background are one negative the clouds are another and the plane is the third*



LIGHT—*Here in strong contrasts Longuorth paints with his photo montages the final major unit in the chain that goes into modern movie productions such as "Women Are Tough Angels"*

SHOOT, I'VE GOT YOU COVERED

By NORMAN ALLEY

★ **Whatever turn events may take in troubled Europe, the newsreel cameramen are prepared to "cover" activities Herewith is a first hand account of conditions by a well known expert who has been covering the continent**

The following article is a salient summary by Charles Saxton of a letter sent from Berlin by the MGM newsreel ace It should be borne in mind that what was true at the time Mr Alley's letter was written may be radically altered by later developments in the fast moving theatre of war In any event the communication is an interesting document in its own right—The Editor

CO AHEAD and shoot I've got you covered!

While the aforesaid is best recognized as an integral line of dice-rolling dialogue it also describes—and fittingly well—the situation in warring Europe as it affects the newsreel cameraman

Leading lens-laddies from the five foremost fact film factories are all on the smouldering scene and more firmly entrenched for the duration" than the paradoxically alert and lethargic hordes whose broad beamed posteriors have long since taken root in the trench troughs and turtle backed pill boxes of the Siegfried and Maginot lines If these two impregnable border barriers were laid out and stretched end to end its uniformed occupants would fall be sleepily laid out, stretching—or at least yawning Napoleon once made the remark that An army travels on its stomach In the present set up the German and Allied armies are all on their backs and they're not traveling

"All Quiet Along The Potomac" would sound like a riveter's rhythm compared to the absolute equanimity existing on 1940's Western Front Both of these lines are as tough to crack as that well known carat cache at Fort Knox in our own Kentucky Both sides know it They are smack up against each other and glaring—but it don't mean a thing if it ain't got that swing to the other guy's kisser It is much like the little boy quarantined with the measles who stands at the window with his nose pressed close to the pane and sticks his defiant tongue out at the schoolhouse bully who stands looking but blinkingly helpless from the sidewalk below But—as Joe Penner characteristically screams shooting his cuffs "There'll come a day!"

Not that there isn't really a war going on over in Europe To the contrary! But thus far the second "World War" hasn't waxed mid Victorian enough to get both its feet on the ground By that, I mean that all Sunday punches thrown to date have happened either in the air or on the sea But even these air and water fiestas have for the most part, been just muscle-showing-off sorees, though they sometimes get a bit out of hand—such as reconnaissance flights of Britons over Berlin and Germans over London—and end up with all the fury of a Saturday night dance-hall brawl in a mining town And usually with about that number of casualties.

These dog fights are blown up to gargantuan proportions reportorially and the papers back home play it up in blackest headlines To date the most successful war correspondents have been those with the best imaginations



Norman Alley (right) ready for action Joe Rucker is the fellow cameraman

True the U boats and raiding pocket battleships have raised a bit of hell on the high seas and over a wide area—reaching from the gambogian shores of South Africa to the sunkist breakwaters of semi neighboring Uruguay In this much British cargo tonnage has been lost, while the German loss has not been negligible either—even if they have had to scuttle some of their very own naval prides to maintain their national pride

The fuse on the powder keg is still sputtering merrily and getting shorter slowly but surely though all of what has taken place to date seems to be in the same category as affects the final score as the superb batting and superb shoestring catches that happen during the warm up practice of the teams just before a world series game

But I'm over here in Europe and glad that I got here early enough to be able to see the first batter come to the plate This enables me to be away down front and get an unobstructed view of the contest when umpire Mars dusts off the plate and does yell "Play ball!"

And my old trusty Eyemo will be right there on my lap when this DOES happen

Whoever wins this game, and I have my own private opinions, is going to fly the championship pennant from their clubhouse roof for a long, long time

Many human interest events—singular and humorous—have passed my way since I left the American Airport at Burbank on the afternoon of September 19, crossed the country, hopped the ocean and lit at Lisbon before the goodbye kisses of my immediate family had dried on my cheeks.

The trip on the Clipper, though stormy, was uneventful with the exception that we were blanked out—via lowered shades and taped windows—most of the way particularly at stop over spots belonging to belligerents such as England's Bermuda. So—as far as looking at the world through Pan American glasses was concerned the view was about as revealing as that which one would get were he traveling to the moon in a hermetically sealed rocket.

The Clipper weighs something like forty tons, but in the hands of the crew which has a record for perfect flying the plane was as easy to steer as a lead pencil We arrived at Lisbon sans even minor mishap and I got acquainted with Portugal—a country whose terrain is just alive with outstretched palms You got me the first time Said palms were affixed to the wrists of native officials who were quite aware and happy over the fact that they controlled the only exit for our material at that moment They could think of more ways and means to milk us of an extra peseta or two than one dared shake an objecting finger at.

(Continued on Page 18)

NOTES FROM SMPE SESSIONS

From the interesting program of technical papers presented at the Spring convention of the Society of Motion Picture Engineers, held April 22 to 25 in Atlantic City the following abstracts are presented for the information of INTERNATIONAL PHOTOGRAPHER *readers The complete program covered every phase of the motion picture and television arts*

Tone Reproduction in Television, I G Malof, *RCA Manufacturing Co Inc*, Camden, N J

The purpose of television is to produce moving pictures of original scenes in homes auditoriums and theaters From the standpoint of the requirements of pictorial tone reproduction, television is closely related to motion pictures However the technic of tone reproduction in television is vastly different from that in motion pictures The degree of perfection of pictorial tone reproduction of present day television is, in some respects not as high as that obtainable with 35mm motion pictures On the other hand, the medium of television is the electrical signal, which is a great deal more flexible than photographic emulsions and permits effects unobtainable with the latter

The paper treats pictorial tone reproduction in television in detail Means of obtaining desired range, contrast perspective, and intensity, with adequate resolution adequate illusion of motion and freedom from flicker, are discussed Limitations and flexibility of pictorial tone reproduction in television are described in comparison with older methods of pictorial reproduction and typical tone reproduction characteristics of the complete television system as well as its components are given

The RCA Portable Television Pick-up Equipment, G L Beers *RCA Manufacturing Co*, Camden N J, O H Schade, *RCA Radiotron Corp*, Harrison N J, and R E Shelby, *National Broadcasting Co*, New York N Y

Spot news, athletic events parades *etc* form an important source of television program material Portable pick up equipment suitable for televising such events has recently been developed The equipment includes a small Iconoscope camera camera auxiliary, camera control and synchronizing generator units and a 325 megacycle relay transmitter and receiver Most of the units are about the size of a small suitcase and weigh between 40 and 70 pounds Each of the units is described and some of the practical applications of the equipment indicated

Quality in Television Pictures; P C Goldmark and J N Dyer, *Television Engineering Department Columbia Broadcasting System Inc* New York N Y

Present television standards specify certain factors that determine the appearance of a television picture only to a limited extent Other factors however such as contrast gradation brilliance, and the shape of the scanning spot are fully as important and are discussed in the paper

A photographic method of producing artificial pictures that permits varying several of these factors will be explained Pictures will be shown that were obtained by this method and approach ideal quality within a given set of standards

A New Method of Synchronization for Television Systems; T T Goldsmith R L. Campbell, and S W Stanton *Allen B DuMont Laboratories Inc* Passaic, N J

Line and frame scanning frequencies in an all-electronic television system need not be frozen to a standard giving limited definition performance if the synchronizing system is arranged to allow flexible operation Automatic operation of receiver synchronizing circuits at variable line and frame frequencies is made possible with the aid of a new type of synchronizing wave form Synchronizing standards which permit both flexible and automatic operation are discussed Transmitter synchronizing apparatus for flexible synchronizing standards receiver circuits for both non automatic and automatic synchronous operation are also discussed and a transition' type receiver for operation on both old and new type of synchronizing signals is briefly described

Defects in Motion Picture Projection and Their Correction, J Gordon, Akron, Ohio

A statement is presented of the various kinds of damage inflicted upon screen images by oil on film The paper enumerates the sources of this evil, the heavy loss the box office can suffer as a result of them, the ill effect upon eyes of theater patrons and suggests means for reducing or eradicating the evil

Products of Combustion of the Carbon Arc, A C. Downes, *National Carbon Co*, Cleveland, Ohio

This paper is a review of work done in the laboratories of National Carbon Company, Inc the College of Medicine of the University of Nebraska the School of Public Health of Harvard University, and the Department of Health of the City of Detroit on the products of combustion from carbon arcs used in the motion picture industry Analyses of the gases coming from various lamps show that even in the stacks the only gas occurring in toxic concentration is nitrogen dioxide

The biological effects of undiluted stack gas from simplified high intensity arcs upon experimental animals were only those due to the nitrogen dioxide

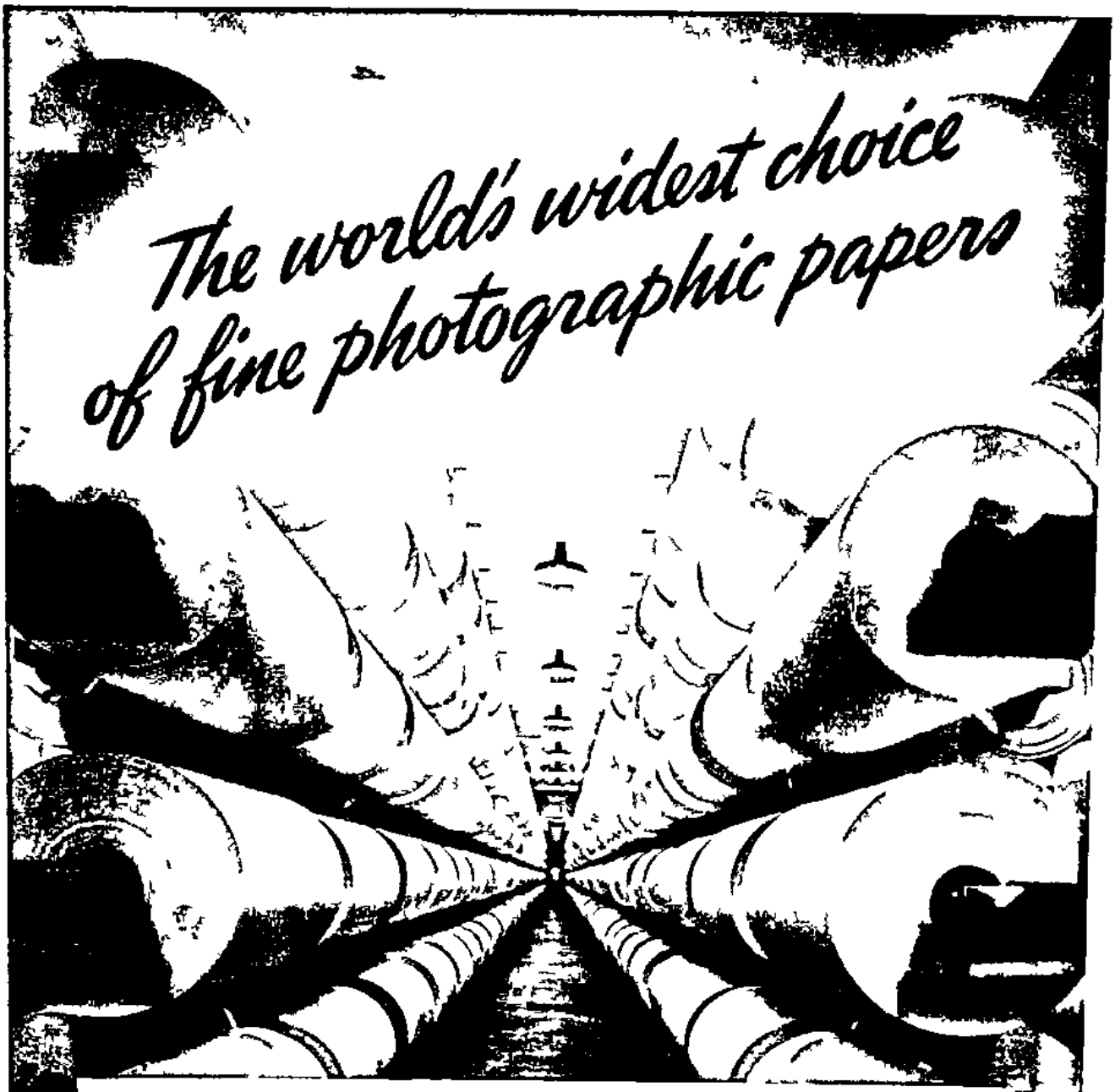
The arc ash fume when administered by intratracheal and subcutaneous routes in rabbits was found to be relatively inert

Determinations of nitrogen dioxide concentrations in poorly ventilated projection rooms failed to show any concentration more tha about one-fifth that generally considered as allowable for exposure of several hours duration and therefore there is little or no hazard in these projection rooms

Studies of ventilation under controlled conditions show that even with very low rates of both lamp house and room ventilation there is no danger of gases or fumes reaching concentrations which are toxic and that if sufficient ventilation is provided to produce comfortable working conditions there can not be any appreciable concentrations of nitrogen dioxide or arc ash fumes in the booth

Silent Variable Speed Treadmill, J E Robbins, *Paramount Pictures Inc* Hollywood Calif

Treadmills are a definite necessity to the making of motion pictures for the purpose of obtaining intimate scenes of animated objects or persons working before moving backgrounds The evolution of this type of equipment dates back to the very beginning of the industry Due to the fact that noise was of no consequence, these earlier machines were simply and crudely constructed The type generally used employed the ordinary conveyor-chain principle utilizing web belts running over series of rollers Other developments include the revolving disk type not entirely desirable due to the variation of surface speed in relation to the distance from the center of the circle the gravity unit motivated by the persons or animals walking or running on them etc Inasmuch as these were generally operated in front of sky backings or moving panoramas speed ranges obtainable by gear boxes or belt pulley or chain sprocket changes were adequate With the advent of sound and a more general use of the transparency or process back ground the need of smoother, more flexible silent mills was recognized The problem was carefully considered by the engineering department of Paramount



THE Kodak photograph c paper mill—only one in the western hemisphere—turns out more than a hundred d fferent brands of paper all noted for the r qual ty un form ty and ease of man pulation And, count ng var ous s zes colors we ghts contrasts and surfaces Kodak is ready on short nouce to sh p any one of more than 60 000 paper items

In this vast variety of products you are sure to find the right types of fine papers for all your needs Among the most w dely used are I *ITAI A PROJECTION*—a fast enlarging med um par ticularly valuable for exh b tion prints I *ITAVA OPAL*—a warm toned material su table for both enlarg ng and contact print ng· *KODALURE*—for pr nts of except onal warm qual ty and depth from negatives of average contrast.

For complete data on the characterist cs pur poses, and man pulat on of the papers men t oned and others wr te for the 48 page book let *Eastman Photograph c Papers* (price 15 cents). It s a dependable gu de to best results

EASTMAN KODAK COMPANY, Rochester, N. Y.



It is possible photographically to turn night into day. By using special filters originated by Scheibe The two views above illustrate moonlight and night effects obtained with two-color graduated filters Sky filters make possible the artistic ship scene at right A great variety of other filter effects are available to photographers

Graduated Filters

● Improvements in graduated filters so that they will give the cameraman a black sky—"black as the ace of spades"—are announced by George H Scheibe, filter manufacturer

Filters that work faster, especially with Super XX and the Infrared films, now are available, Scheibe states They are said to be ideal for motion pictures, creating real sun night effects

"Never have films been as fast as they are today," Scheibe declared "and I have made my filters to match this new speed Graduated filters are easy to work with and are becoming increasingly more popular They can be used on any film

"On slower Pan films good results will be obtained by opening the shutter and using smaller stops On the ordinary Ortho stock nice shots have been made with just the regular yellow graduation, with clear lower half No increase in exposure is necessary They are useful for toning down a glaring highlight and for overcoming strong highlights

"The filters can be used on any kind of camera having a ground glass for focusing

Neutral density graduated filters also are popular for motion picture shooting



One can use the single or double graduation with 50 per cent top and 25 per cent lower Any combination of densities may be had The filters do not alter the natural color in the scene," Scheibe said

BOOKS

PHOTOGRAPHING IN COLOR. Paul Outerbridge author Amateurs camera book published by Random House Inc N Y Printed in U S A Price $4.85

● A finely printed well bound book containing approximately 197 pages of text and 14 color plates by the author A very clever color chart is inserted wisely, toward the end of the book It shows graphically the results step by step that may be expected from a set of under normal and over exposed negatives

Other than the above the contents of the book are divided into two parts Part I four chapters deals with information that the average person getting himself involved in color is probably unfamiliar with As the author expresses himself In black and white you suggest in color you state Much can be implied by suggestion but statement demands certainty absolute certainty False rendering of colors in black and white often produces arresting tonal contrasts and dynamic prints But not so in color where the slightest falsity of color is both clearly apparent and wholly unacceptable Happy accidents do not occur in color

The last statement is the reason for the whole book The subject is handled well with full knowledge of the pitfalls encountered and the solution to these problems is offered you with many explanatory notes Of the many handbooks read this is the first one brought to our attention written with the understanding of the trials the average photographer will undergo before arriving at his goal—the perfect color print

Part II deals with the laboratory end of the procedure also elaborately detailed with information to help prevent disaster Lights and their qualifications and other equipment needed and no short cuts are included

Four methods are dealt with, namely Dufay color Kodachrome, one shot cameras, slip back or (in the same category) three single exposures The print end deals with the Chromatone Carbro and Wash Off Relief processes

The breaking down of both Dufay color and Kodachrome are carefully explained The laboratory work is strictly adhered to as recommended by the various manufacturers This because the above mentioned methods are the standards of today Included is a complete list of price, equipment, chemicals film paper, etc, also time tables for the various methods

In conclusion if you are contemplating color or have already started spend that $5 (tax included) for this book with the knowledge that you have secured your first bargain in your experiments for color photography

NEWS OF THE MONTH

In conection with the Lillian Russell stills featured in this issue of INTERNATIONAL PHOTOGRAPHER *the following press release from Harry Brand gives an interesting sidelight on the Glamor Gal of the Gay Nineties*

● Hollywood had to admit that it couldn t spend enough money to keep up with a gal named Lillian Russell

Even the movie stars of the extravagant '20 s who threw $50 000 parties and rode around in $25 000 foreign made limousines never knew such lavishness as did Lillian Russell the actress whose biography is being filmed by 20th Century Fox

From the day she was discovered in 1879 by Tony Pastor until she quit the stage in 1912 she kept Broadway in a dither with her $3900 corsets and her $30 000 chinchilla coats

We re spending more money on this picture than any I ever directed said Irving Cummings the director for Lillian Russell and still we can t keep up with La Russell If we spent as much money for replicas of the glamorous Lillian s possessions as she did for them we d bankrupt the studio

The 20th Century Fox research department headed by Miss Frances Richardson discovered these facts She rode around Central Park in New York on a gold plated bicycle that cost $1900 She traveled on her tours across the country in a $250 000 special railroad car She wore corsets that were diamond studded and gold leafed in front

Her stockings embroidered with butterflies and birds cost $400 a pair Her gowns dotted with gold sequins ran as high as $5 000 each Her ostrich feather bill alone for her hats mounted into the thousands each year

She valued her jewels at one time at $100 000 She thought nothing of spending $5 000 for a dinner ring She gave diamonds and emeralds worth thousands to her friends and wardrobe women Her furs were the costliest that money could buy

She earned as high as $5 000 a week during her heyday a sum that Broadway never since has been able to pay and even after her retirement from the legitimate stage she played in vaudeville for $3 000 a week She never had failure in any play She packed the old Weber and Fields Music Hall for five years straight in the most fabulous run in American theatrical history

Hollywood is doing its very best to equal La Russell s mode of living but it can only spend $1 000 on a corset $100 for a pair of hose and $400 for a gold plated bicycle

Hollywood is downright ashamed of itself

● Further evidence of the international character of INTERNATIONAL PHOTOGRAPHERS reading audience was received last month from Egypt

On the richly embossed stationery of the private secretary to His Majesty the King from Abdin Palace in Cairo the following message was received

The *International Photographer* is here by kindly requested to take note that owing to the sad fact that Mr B Askanaz former Private Cameraman to His Majesty the King of Egypt has died recently all publications or correspondence should be henceforth addressed to his successor — Mr Arshak, Private Cameraman to His Majesty

Last month a letter was received from a French subscriber who had been called to active duty in defense of his country Month before it was reported that a member of the Hollywood Adult Educational Center color photography class had read about the class in this publication while in London

INTERNATIONAL PHOTOGRAPHER truly is international we are happy to report

—THE EDITOR

Cameraman Calls Signals

● For smooth team play there is nothing in Hollywood to touch the work of Linda Darnell and her favorite motion picture cameraman, Pev Marley a veteran in the business

They even have a set of signals worked out between them to cover almost every contingency

Walter Land is directing Linda s latest production Star Dust but it is to Marley that Linda looks for guidance on these little things that fall beyond the director s purview A nod of Marley s head to the right means that Linda is slouching just a bit too much for good photographic effect A nod to the left that she is a little too tense

When Pev drops his right arm Linda knows what to do and when he drops his left she knows what not to do

She s as beautiful and accomplished a youngster as I ve ever photographed " said Pev but naturally she s still new to the business and she still has a few little personal mannerisms which would pass unnoticed ordinarily but which she can drop to advantage

I ve studied her so closely that I m familiar with these little tricks and so we ve devised these signals so that I can warn her when she clenches her hands too tightly slouches or rests her weight too much on one foot

"It s worked splendidly too he concluded

Camera Rehearsals

● Cast rehearsals are common enough in Hollywood No director films a scene without rehearsing it first But Sam Wood, who is making Our Town' for Sol Lesser goes farther than that—he rehearses the camera as well as the cast

The camera rehearsals are necessary because Our Town' the film version of Thornton Wilder s Pulitzer prize winning play presents many unusual photographic problems It is to be a picture of photographic mood as well as action To solve these problems Production Designer William Cameron Menzies prepared a camera script for Director Wood

The camera script consists of detailed sketches of each camera angle of each scene The sketches are mounted on cardboard and kept on an easel just behind the camera Before Director Wood films a scene he Menzies, and Cameraman Bert Glennon go over the sketches and map out the camera movements called for

Tri State Firm Acquired

● The General Broadcasting System with studios in the Buhl Building Detroit announces the acquisition of the Tri State Motion Picture Company of Cleveland Ohio which for more than seven years has been producing industrial and commercial motion pictures both silent and sound

Donald C Jones president of GBS assumes the office of president and general manager of the new company In Cleveland the company will hereafter operate under the name General Broadcasting and Motion Pictures Incorporated GBS has been operating in Cleveland and Detroit for nearly ten years specializing in high fidelity transcriptions, sound slide films sales training programs and radio shows

The motion picture studios completely equipped for sound by RCA will remain in Cleveland while the radio recording and slide film facilities will operate in Detroit

Freund Shoots Sun Spots

● The sun spots that played havoc with telegraph and cable communications last month have been recorded on film by Karl Freund member of Local 659 IATSE and noted cameraman

Freund who photographed 'The Good Earth" and other pictures and is currently photographing Pride and Prejudice at MGM substituted a camera lens for the eyepiece of a small reflecting telescope and obtained footage of the spots on film Flames from the edges of the gigantic holes in the sun s covering of gases are plainly visible

nothing to lose and everything to regain—mean ng of course the former German col onies and a firm foothold and important pla e in the world economic picture This they claim imperatively calls for the com plete snuffing of the Britsh flame that burns on the seven seas

But to get back to the scarcity of things Cigars are a dollar and a pack of cigarettes a dollar ten With very few takers unless it is the tourist

I was walking down Unter Der Linden shortly after my arrival when I became conscious of two burly storm troopers hur riedly though furtively dogging my steps

What s giving out? I said to myself and though I knew I was innocent of most everything but innocence my concern mul tiplied by leaps and bounds until I threw my half smoked cigar into the gutter Im med ately the two bloodhounds of Berlin made a double dive for the butt and my mind was at ease!

I had heard rumors both in America and even over here that the reason Hitler combs his hair down as he does—half Will Rogers and half Raymond Hitchcock—is because he wishes to cover a st ll festering bullet wound in l is forehead received in the World War of 1914 18 Personally I doubt this but one wouldn t be knowing One could not even get to a valet of Hitler s to find out since Adolph doesn t have one Nobody has ever seen the First Soldier of the Reich" except when he was fully dressed and ready for the outside world He retires to his private chamber fully clothed locks his heavily sentried door from the inside and nobody but God sees Berlin s Mr Big again until he steps out next morning fully uniformed and with his hair combed down as low as an inter mission curtain

I have made five trips back and forth between Berlin and Rome since this busi ness of getting newsreel firsts" through to Lisbon and off in a hurry for America has demanded it

One of my later trips found me in blacked out Berl n on Christmas Instead of finding everybody down in the mouth on this anniversary of the B rth of Christ, they were in h gh spirits and spending money like drunken sailors You see there seemed to be a synthetic inflation of cur rency in Germany I think this could be due to the immense amount of Jewish mon ies which had been confiscated and w h ch the government had allowed to flow into the hands of the Aryans By midnight Xmas Eve the stock shelves in most of the stores were as clean as a hound s tooth They were fresh out of everything—people having had money for every conceivable gift of the Magi

Money stolen from the Jews, being rav ishly spent to honor the birth of the World s Greatest Jew!

More later And now that the Finns and Russians have patched things up before I could get a gander at God s frozen people I wouldn t be a bit surprised from the looks of things, but what my next port of call w ll be Bucharest

Location Sites Dwindling

● Every time a new family enrolls in the ranks of the citizenry of Southern California the collective Chambers of Commerce of Los Angeles Van Nuys San Fernando Pasadena Beverly Hills and waypoints chant with glee But Holly wood s mot on picture producers reach for another aspirin For the more people that come to Southern Californ a the harder it is on the movie magnates

The new residents are annihilating lo cation sites as fast as they can construct an FHA house

There was a day when all a producer had to do was to open the back gate on his lot, and all the open country within sight was available for locations as many members of Local 659 IATSE will recall Today there isn t a single studio that isn t completely surrounded by domiciles and all of the favorite location places rapidly are becoming population centers

Cecil B De Mille made The Squaw Man in a barn in the middle of an orange grove at what is now Vine and Selma streets There was nothing but groves and wheat fields on all sides The deputy sheriff who patrolled the beat from West ern Avenue to the ocean kept his horse in the same stable

More studios came out more people moved in and Hollywood became a city But there still was plenty of acreage for locations Then the population started jumping by leaps and bounds The studios were forced to go farther and far ther afield

Laurel Canyon was a favorite spot The site where The Little Minister was filmed is now a sold out subdivision Bronson Canyon was another favorite location It was abandoned because of the thunder of passing automobiles

Recently the studios discovered a spot called Baldwin Lake which is located on the old Rancho Santa Anita not far from the racetrack that now bears the historic name It is a small body of water sur rounded by tropic growth Safari Honeymoon in Bali Typhoon and similar pictures have been shot there in the last year But the growing popula tion is not to be denied A real estate company has taken over the property and houses are popping up all around

Cameraman Acts Natural

● Dave Oliver former newsreel camera man who was jerked from his profession to become a comedian by Director S Syl van Simon returned to his camera in a scene for MGM s Two Girls on Broad way

Oliver was a Simon discovery when Simon worked at Universal Noticing the natural ability that Oliver displayed the director induced him to give up the camera and become a comedian

When a histrionic combination camera man and newsreel man was needed Oliver was contacted and put to work in the new film

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TELEVISION

Television Possibilities Cited

● Predicting that within twelve months after the Federal Communication Commission grants television stations the right to have commercial television programs over 25 000 television receivers will be sold in the New York area alone, Thomas F Joyce Vice President of the RCA Manufacturing Company, told 225 members and guests of the Society of Motion Picture Engineers assembled in Atlantic City last month that television was a potentially gigantic industry that would eventually provide employment for hundreds of thousands of people

Approximately thirty stations in eighteen cities throughout the country have applied for television licenses Mr Joyce said Six of these have already been granted If the others are granted eight to ten million families or about 25 per cent of our entire population will be able to receive television service in the home he said

If these television stations do begin sending out television programs I do not think that the prediction of at least a million television receivers being purchased by the American public within five years is too optimistic That means that our potentially great television industry is fairly under way

Mr Joyce invited the motion picture industry to play a more important role in the early development of television as an entertainment service He pointed out that no one has yet been able to gauge exactly the public's great capacity for entertainment As work hours are shortened and people have more time for leisure, they will be receptive to new as well as long established forms of entertainment and will patronize those which offer the best services without necessarily hurting any existing forms of entertainment that continue to give the public the service it wants

He pointed to the mistake which the phonograph industry made in the early days of radio's development, when they chose to ignore the new medium If they had taken an active part in its development they might now still be holding the public's favor with both radio and progressively better phonographs and records he said

Instead it is now the other way around Radio companies took over the phonograph companies and by applying modern radio technical advances to the phonograph art, have re-vitalized the record business to the point where it is once again a thriving and growing business

Mr Joyce said that television would open up many new avenues of exploitation to the motion picture industry By means of television, condensed previews of movies can be presented to home audiences Potential screen stars will receive their screen tests through the television camera A director will be able to judge how a scene will look to his potential audience by viewing it on a television screen as it actually is being performed on the studio lot at the same time that the cameras are grinding out film

He told the engineers that many of the first night audience of the Gone With The Wind movie were disappointed because they did not have an opportunity to see the stars who had come from Hollywood to attend the premiere Later it was learned that all the stars were attending a special party given by a prominent individual With television many thousands might have attended this exclusive party while enjoying the comforts of home

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By NELSON C. McEDWARD

On EASTER Sunday Thomas Lee's W6XAO broadcast and televised the services from the Hollywood Bowl with excellent results The wide angle camera was situated on a roof near the stage and practically covered the entire field Dwight Warren covered the close ups with the telephoto on the stage The lighting was furnished by Otto K Olsen illuminated by five 18's on either side also an arc directly beneath my cameras for all close-ups

The newsreel men had to stop down a great deal on account of so much light No trouble was had and everything ran very smoothly I panned around to the audience to pick up the people as they were leaving, followed by the lights, and about that time the light was just about right

On St Patrick's Day Dwight Warren, John Polito and myself televised the Rodeo at the Coliseum but the light was very bad toward the end of the day It kept us all pretty busy jumping from one event to another as there were 60 events, ranging from calf roping to artists performing on a 175 foot tower These particular shots were difficult to televise as the performers blended into the audience and due to poor light made separation almost impossible The wide angle camera was too far away to do much good, due to our being so high in the press boxes, so the telephoto saved the day for us

Recently we tested out the equipment at the Legion Stadium for televising the wrestling matches The camera was placed in the rear of the stadium up high with the telephoto which covers nearly all the ring The lights were not bad but Otto K Olsen is rigging up some more for better results I will have a telephoto lens about 30 feet from the ring for a close angle and hope the wrestlers don't throw each other in my lap as they nearly did before

Fights and wrestling matches at the Hollywood Legion Stadium will be a regular event on Station W6XAO on Monday and Friday nights

Television's big claim is the marvelous reporting it will be able to do on news events especially when the horizon limitation is overcome Television will be very exciting indeed on such things

A few weeks ago we televised "The Ides of March" a Civil war play directed by Steve Sekely from the Universal Studios. It lasted 75 minutes the longest television play yet produced at W6XAO

A few weeks ago in the first public television test of the kind ever made, New York City unfolded itself on receivers all over the metropolitan area and in Schenectady just as it looks to aviators winging overhead Results were regarded as good

Viewers sitting before 8x10 inch receiving screens easily picked out big buildings saw automobiles speeding along the parkways and boats in the Hudson and East rivers looked down on the World Fair grounds and followed the skyline in the more distant views

Highlight of the television from the sky came near the end of the 15 minute scenic program when views of a 21 passenger plane accommodating the camera machine were thrown on the screen Aboard were newspapermen looking in on a specially installed receiver Thus they could see their own plane in action

TRADEWINDS

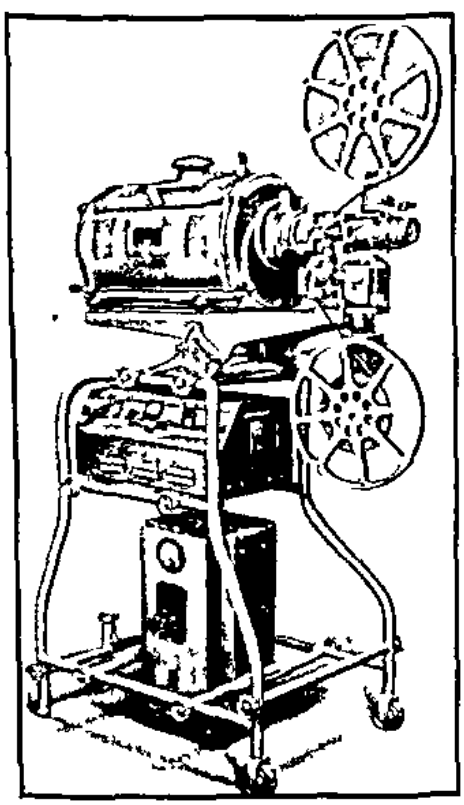
Projector Prices Lowered

● With the rapidly increasing use of the Filmoarc and the 1200-watt "Auditorium" Filmosound sales Bell & Howell economies in production have now made possible substantial reductions in the prices of these machines said to be the two most powerful sound projectors in the 16mm field At the same time, Bell & Howell announces that improvements in the Filmoarc have increased by nearly 100 per cent the light output of this high intensity arc machine It now produces approximately 1200 lumens

The Filmoarc, available with either rolling or adjustable extension leg stand is now priced at $1275 complete with amplifier, rectifier two permanent magnet dynamic speakers and all connecting cables Because the Filmoarc has had wide acceptance as auxiliary equipment in motion picture theatres where its use with existing 35mm installations renders unnecessary the additional amplifiers and speakers this machine is also listed without this equipment Either model of the Filmoarc, complete but without amplifier speakers or their cables, is now priced at $977.50

The "Auditorium" Filmosound, with its powerful 1200-watt prefocused lamp, is now priced at $745 with one projector one amplifier one speaker and cables The dual installation with instantaneous change over for uninterrupted programs of any length is priced at $1320 with two projectors one amplifier, two speakers and cables

Other combinations of one or two projectors with one or two speakers are available at commensurate prices



Rolling stand model, Filmoarc Projector

Cine-Kodak

● Nearly five times as fast as the 2 in f3 5 it replaces opening up new filming opportunities both in black and white and full-color a new 2 in f1 6 Kodak Anastigmat telephoto lens for Cine Kodaks is announced by the Eastman Kodak Co

Adaptable to any 16mm Cine Kodak with interchangeable lenses, the new 2 in f1 6 widens both night time and dark day possibilities for movie-makers Of a focal length short enough to allow filming with a hand held camera—yet long enough for fine theatrical, sports, and nature study work—it is a lens that will find frequent employment by any 16mm motion picture enthusiast

Several technical features adapt the new f1 6 lens for unusually critical work A depth of field scale on the lens barrel shows at a glance the field depth for various diaphragm openings at any distance setting An engraved indicator line is helpful in measuring lens to subject distances with utmost accuracy in close range shots The nine diaphragm stops range from f1 6 down to f22

Retail price of the new lens is $90

Camera Models Added

●Two new models of the popular Agfa Memo Camera which have just been announced will be of interest to photographers preferring the 35mm "single frame" picture size Each of the two new cameras employs the same general construction features of the Agfa Memo camera introduced last year But the aperture and film advancing mechanism are designed to give 48 exposures 11x21mm (approximately ¾x1 inch) with a Memo film cartridge

Educators and others who take 35mm pictures for projection will be especially interested in these single frame cameras since positive projection strips can be inexpensively made direct from the original negative

The two models 100 per cent American made by Agfa Ansco in Binghamton New York, are Single Frame Memo f4 5 model JN118 $25 00, Single-Frame Memo f3 5 model JN119 $35 00

Dinky Inkie Accessories

● As accessories for the Dinky Inkie 150 watt spotlight Bardwell & McAlister Inc of Hollywood have announced snoots (light shades) in two sizes and a diffuser frame with Fiberglas Matt diffuser

These accessories fit into clips on the front of the light and are invaluable for the photographer whose time is valuable An adapter, which permits the use of the Dinky Inkie on an ordinary music stand tripod is also available

Something new in the way of diffusing materials Fiberglas mat is really made of glass It comes in two thicknesses—No 1 heavy, is 36in wide and retails at $2 00 per linear yard, No 2 is 24in wide and retails at the same price

Fiberglas does not discolor from heat The light transmitted is soft and even, and photographers will find that it is unusually efficient when a subdued light is desired

All of these accessories can be purchased from Eastman Kodak Stores or camera shops throughout the United States and Canada that sell the Dinky Inkie spotlight

35mm Kodachrome Adapters

● Two new Kodachrome Adapters to accommodate 35mm Kodachrome film for use in popular 6½x9cm and 9x12cm combination sheet film and plate cameras are announced from Rochester by the Eastman Kodak Company

The new adapters make it possible for the owner of a Kodak Recomar 18 or 33, or other sheet film camera with similar fittings to utilize Kodachrome film in the standard 35mm magazines For the documentary worker the 35mm Kodachrome Adapters provide facilities for using such special high resolution films as Kodak Micro File Safety Film created specifically for copy work in which the maximum of detail is to be retained

The 35mm Kodachrome Adapters in use are substituted for the usual film slide or pack adapter For accurate results, the camera must be on a tripod or other firm support The subject is composed and focused on a fine grained ground glass panel the size of the 35mm film frame (24x36mm)

Retail price of the 35mm Kodachrome Adapter for the Kodak Recomar 18 or similar 6½x9cm sheet film camera, is $23 50 The adapter for the Kodak Recomar 33 which also fits certain other 9x12 cm cameras bears the same price

Filmo Camera Titler

● Newest accessory offered by the Bell & Howell Company is the 16mm Filmo Titler which will fit Filmo 111 70 and 121 Cameras without the use of separate loose adapters Rigidity and compactness are said to characterize the new unit, and special mention is made of a clever arrangement which permits titles to be centered accurately through the viewfinder of each camera Bell & Howell states that this 'visual centering' feature fills a long felt want, and that with it off center titles are a thing of the past

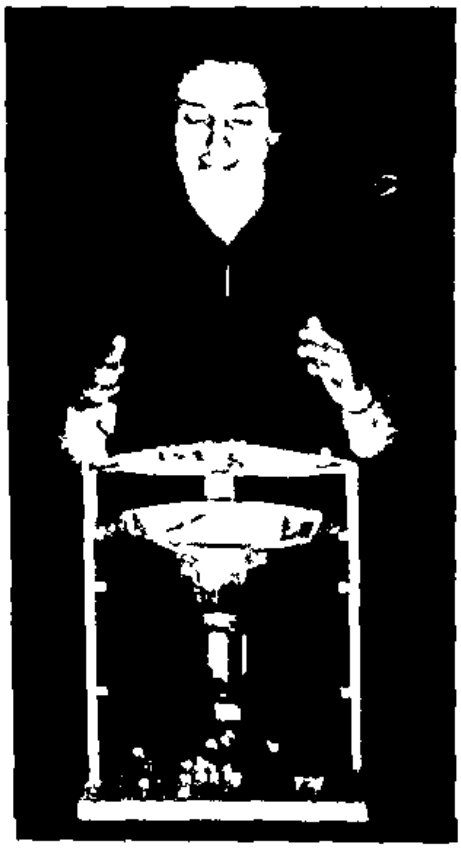
The Filmo Titler can be used in the conventional horizontal position or it may be set up vertically The reflectors are adjustable and are made to take ordinary No 1 photoflood lamps When set up for normal use the camera is so positioned that the film plane is one foot from the title card The field covered at this distance has been found best says B&H, for general lettering and for type written titles as well Even ordinary newsprint has been so filmed it is claimed

G E Drying Lamps

● Development of a complete line of drying lamps designed to produce a wealth of effective infrared (heat rays) instead of light has just been announced by General Electric s lamp department

Most powerful of the four infrared sources is a 1000 watt unit Of medium intensity is the 500-watt unit. There are two 250-watt drying lamps one requiring special reflector equipment, as do the 1000 and 500-watt lamps the other having its own reflector built into the bulb

Use of the new lamps in a wide range of trial installations clearly shows that heat from the lamps can be used to great advantage in a variety of industrial operations Radiation from the drying lamps is of such a nature as to dry photo prints, industrial finishes of many kinds foodstuffs paper products and the like faster and at less cost than conventional drying equipment has been able to do The new line permits users to speed up process drying, expedite surface heating and to facilitate today's trend toward straight line continuous flow production



Powerful infrared radiation produced by this 1000 watt GE drying lamp in its reflector passes through a sheet of cellophane The heat rays are not absorbed until they penetrate flint like kernels of pop corn resting on the cellophane



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PEORIA BOY

(Continued from Page 4)

Maria Ouspenskaya Jean Parker And then when they had made these commitments the war broke out in Europe and the bank decided to back out The unhappy pair were faced with ruin and a flock of law suits from people already signed For a time things looked black, but everybody had faith in Garmes and Miss Comandini

George Schaefer, president of RKO, was sold on the story, so much so that he stepped in in Hollywood and helped with the result that the Bank of America agreed to back Garmes Again the deal was on Garmes organized Academy Productions closed his pending production deals secured the finest talent in every department and on November 25 Director Edward Sutherland called "Camera" on the first scene of "Beyond Tomorrow" It was under way

Those who have seen the picture say Garmes' future as a producer is now assured He has a contract for three more films for RKO release His first picture is hailed as great But this man from Peoria is made of such stuff that he probably won't be satisfied with anything until he some day wins the Academy Award for the best picture of the year

B&L Slide Projector

● A new 2x2 in Slide Projector offering crisp, brilliant screen images is now being offered by Bausch & Lomb for the serious worker with miniatures who desires projection of black and white and color transparencies on a par with the 3¼x4-in slides used in standard Balopticons

Tested with ten 2x2 in projectors on the market the new B&L instrument was reported to have delivered from 26 to 300 per cent more light to the screen. The slide temperature is kept low enough to operate without fear of damage to valuable films, B&L states The projector is priced at $33.50, the case at $5 00

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PATENTS

By ROBERT W FULWIDER

No 2,191 017 — Process for the Production of Silverless Picture and Sound Records by the Chromate Method *Max Botho Hollaender*, Germany assignor to Sfico A G., Schaffhausen Switzerland Application Nov 22 1937 In Germany Dec 1, 1936. 1 claim

A method of producing silverless pictures and sound tracks by the chromate method and making use of an intermediate silver positive from which the chromate positive is printed

No 2 191 037—Color Forming Developer Containing Amines. *Leopold D Wonnes* and *Leopold Godowsky, Jr*., assignors to Eastman Kodak Co Application Nov 12, 1938. 3 claims

A color forming photographic developer having a rapid rate of penetration for gelatin layers

No 2,191 038 — Photographic Color Film and Process *John G Capstaff*, assignor to Eastman Kodak Co Application No 19, 1933. 5 claims

A lenticular film having three emulsions with two of the emulsions having silver images and the third a dye image

No 2,191,502 — Multicolor Film and Process *Virgil Bernard Sease* and *John Rau Weber* assignors to Du Pont Film Mfg Co Application Jan 22, 1937 6 claims

A photographic element comprising a transparent base having at least two differentially sensitized emulsion layers superimposed thereon, one of said layers being imposed directly upon the base and a layer of pre-fogged silver salts interposed between said emulsion layers

No 2 189 751—Method for Obtaining in Projection Images in Colors. *Carlo Bocca* and *Domenico Rudatis* Venice Italy Application Feb 1 1938 In Italy Dec 15 1937 13 claims

A method of producing colored images by forming a series of color separation prints each print being formed on a separate lenticular base and impressing the separate prints in succession on transparent plastic and hardening the plastic

No 2 189 817 — Color Forming Photographic Composition Element and Process *Lynn Barratt Morris* assignor to Du Pont Film Mfg Corp N Y Application March 13 1939 11 claims

A process for treating paraffinic hydrocarbons which comprises subjecting the same under dehydrogenating conditions to the action of a mixture of a major proportion of aluminum oxide and a minor proportion of a vanadium oxide

No 2 189 837—Tripack *Virgil Bernard Sease*, assignor to Du Pont Film Mfg Corp Application Jan 15, 1937 5 claims

A tripack film having a front film with a blue sensitive emulsion a middle film with a green-sensitive emulsion, the green and blue-sensitive emulsions having the same sensitivity range, and a rear film with a red sensitive, green blind emulsion

No 2 189 932 — Light Dividing Device. *Joseph A Ball* and *Wadsworth F Pohl*, assignors to Technicolor Motion Picture Corp Application Jan 16 1936 3 claims

A beam splitter making use of three right triangular prisms mounted together and forming one image by double reflection and with another image formed along the optical path of the entering light ray

No 2 189 933—Light Dividing Device. *Joseph A Ball* and *Wadsworth F Pohl*, assignors to Technicolor Motion Picture Corp Original application Jan 16 1936 Divided and this application March 23 1939 6 claims

A beam-splitter making use of three triangular prisms mounted together and forming two images by double reflection

No 2 190,229—Cabinet for the Storage of Film *John G Bradley* Williamsville Ill Application August 1 1939 20 claims

A storage cabinet having a valve to admit air into the cabinet but preventing the escape of gases and a temperature operated valve to dispense a fire extinguishing medium into the cabinet

No 2,190 294—Light Source for Projection System *Gyon Mili* assignor to Westinghouse Electric & Mfg Co Application Nov 6 1937 6 claims

A mercury vapor lamp and an incandescent lamp arranged with suitable optical equipment for projecting colored motion pictures

No 2 191,119—Box Shaped Spool for Films *Andre Leon Victor Clement De Brie* Paris France Application Dec 29 1936 In France Oct 7 1936 7 claims

A film reel having solid flanges and a belt fitting around the flanges to form a light tight covering with a light tight passageway for the film

No 2 192 692—Camera *Hubert Nerwin* Germany assignor to Zeiss Ikon Aktiengesellschaft Dresden Germany Appln Sept 10 1938 In Germany Sept 13 1937 8 claims

A camera using film perforated along each edge and which has teeth engaging each set of perforations the sets of teeth being capable of being moved apart to tension the film in a direction transversely of its length

No 2 192 917—Motion Picture Framing Device *Frank F Runge*, assignor to Radio Corp of America Appln Nov 12, 1935 5 claims

An automatic framing device making use of a photocell to detect an out of phase position of the film and operating the framing device to correct it

Re No 21,393—Framing Device for Motion Picture Projectors *Herman A de Vry* Chicago Ill Original No 2 011,236 dated May 19, 1936 Appln for reissue May 14 1938 15 claims

A flexible drive such as a chain, having a loop in it so that one driven member may be shifted relative to another driven member by varying the length of the loop while driving the two members in synchronism

No 2,193 023—Photographic Reversal Process. *Ralph M Evans* and *Wesley T Hanson, Jr* assignors to Eastman Kodak Co Appln Apr 6 1938 6 claims

A reversal process in which the image is developed re-exposed without removing the silver image and then redeveloped in a solution containing a p-phenylene diamine developing agent and a p benzyl phenol coupling compound

No 2 193 031 — Rewinding Mechanism For Motion Picture Projectors. *Donald F Lyman* and *H C Wellman* assignors to Eastman Kodak Co Appl May 11 1937 12 claims

A motion picture machine with a rewind attachment which is fixed so that when the control is set to rewind the film the latter may not be threaded through the machine in the usual way

No 2 193 034—Focusing Mechanism for Interchangeable Lenses *Joseph Mihalyi* assignor to Eastman Kodak Co Appln Mar 11 1933 10 claims

A focusing mechanism for cameras with built in range finders and making use of interchangeable lenses of different focal lengths in which a member attached to the movable portion of the lens mount moves the range finder mechanism in accordance with the focal length of the lens

No 2 193 722—Method of Color Reproduction *Arthur C Hardy* assignor to International Corp N Y Appln Sept 1 1936 17 claims

A color separation image for use in color reproduction which consists of a monochrome image of a colored subject, each point of which is a record of the differ

ence between the intensities of two spectral components of the light emitted at the corresponding point of the subject

No 2,193,931—Process for Producing Multicolored Photographic Images. *W Michaelis Belgium* assignor to Bela Gaspar Brussel Belgium Appln Mar 23 1937 In Germany Mar 24 1936. 3 claims

A process for producing colored images in which a silver image which is uniformly dyed is treated with a dye destroying agent which removes the dye where the silver is and leaves it elsewhere and then changing the silver image into a silver salt which will form a dyestuff image of a different color from the first dye

No 2,194,039—Prism Attachment for Cameras. *Joseph A Valentine* assignor to Universal Pictures Co., Inc Appln Oct 18 1937 1 claim

A trapezoidally-shaped prism designed to be placed in front of an objective lens with its longest base up and having a thickness of approximately one-half the diameter of the lens a width adjacent to the lens substantially equal to the diameter and a length of more than twice the diameter

No 2,194,481—Film Handling and Apparatus Therefor *Barton Allen Proctor* assignor to Kinatome Patents Corp Appln Jan 6, 1934 Renewed July 21, 1939 24 claims

A sound film machine having means for laterally moving the film with respect to the sound slit.

No 2,194,542—Optical Reduction Printer *Ulford E Collins* assignor to Radio Corp of America Appln July 30 1937 8 claims

A continuous optical printer with the relative positions of the positive negative and optical systems fixed, but having means for laterally moving the positive and negative independently of each other while the printer is operating

No 2,194,565—Motion Picture Projector. *Karl Brenkert* assignor to Brenkert Light Projection Co., Detroit, Mich. Appln Oct. 25 1938 3 claims.

A motion picture projector having a blower adapted to force air through a chamber of which the aperture plate forms one side

No. 2,194,591—Apparatus for Projecting Color Films. *John Eggert* and *Gerd Heymer* Germany assignors to Gen. Aniline & Film Corp., N Y Appln Oct 7 1937 In Germany Oct 13, 1936 2 claims

A projector for lenticular film making use of two set. of cylindrical lenses in addition to a codenser lens

No 2,194,879—Film Apparatus. *Denes von Mihaly* and *Rudolf Wehler*, assignors to Julius Pintsch Kommanditgesellschaft, Germany Appln Oct 10 1936. In Germany Oct 10 1935 7 claims.

A fork like member to be used for each reel of a sound film projector the fork twisting the film so that it does not touch the sides of the reel and create noise

Concentrated Filament Lamp

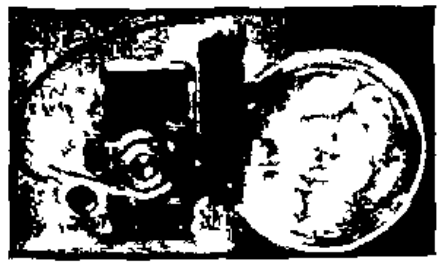
● Bell & Howell announce a brilliant new lamp for the B&H 16mm film viewer Said to increase the brilliance of the image on the ground glass by a full 50 per cent, and to provide greater uniformity of light over the picture area, the new lamp achieves these improvements by concentration of the filament rather than by increased wattage

Bell & Howell explain thus The optical system of the viewer accepts light from a definite field, just as a camera lens covers a given area, and it is only that portion of filament included in this field which is effective in lighting up the film in the viewer Also uniformity of light over the picture area depends on uniformity of filament distribution in the field of the lens.

A new filament design has been worked out in collaboration with the lamp manufacturer whereby the length of filament in the useful field has been greatly increased thus providing added brilliance with the same wattage

"Air Raid" Defense

● An "air raid defense" program inaugurated this week at 20th Century Fox studio in an effort to cut down delays in filming of exterior scenes caused by airplanes already has proven successful and is calculated to save the company thousands of dollars weekly Binoculars have been added to the equipment of the guard on each outdoor set. Numbers of airplanes flying overhead are noted an ownership search made and the pilot contacted and asked to co-operate with the studio



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● A new truly universal exposure guide —furnishing quick data for all Cine-Kodak films, 16mm and 8mm black-and white or Kodachrome, indoors or out—will now be a part of each new Cine-Kodak the Eastman Kodak Company announces from Rochester

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The new guide can be attached to any present Cine-Kodak for $1 plus shipping costs For this service the camera should be left with a Kodak dealer, who will forward it to the proper Eastman Kodak Company Branch. A Pocket Model of the Cine-Kodak Universal Guide is also available separately for $1, the price including a complete set of film cards.

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Data On Hard of Hearing

● Basing his conclusions on data obtained from 9,000 patients examined in 17 clinics in 12 cities, W. G. Beasley, of the National Institute of Health U. S. Public Health Service, declared last month that only five per cent of all Americans sufficiently deafened to derive benefit through hearing aids actually use them.

Beasley was speaking before the opening session of the Spring Convention of the Society of Motion Picture Engineers at Hadden Hall, Atlantic City, and further declared that hearing aids are used three times as often by women as by men because of different types of deafness which affect the two sexes.

Most women he found have "conductive deafness," with a large amount of relatively uniform hearing loss of air borne sounds, with practically no loss for sounds conducted through the bones of the skull.

On the other hand most men have "progressive nerve deafness" which involves large amounts of loss on tones above 1,000 cycles for both air and bone conduction and very little loss by either air or bone conduction on tones below 500 cycles. Thus, he points out there is an intricate problem of relationship between the nature of hearing loss and the possibilities of improving hearing for the deafened through improvements in the design of hearing aids.

The 250 motion picture engineers and executives attending the convention also heard H. P. Gage of the Corning Glass Works, plead for standardization of color theories throughout industry in a paper entitled "Color Theories and the Inter Society Color Council."

This paper is the first consideration the SMPE has given color theory since joining the Inter Society Color Council last Fall. The Council is made up of 74 delegates appointed by eleven member societies and by 67 individual members. It is attempting to standardize colors in all industrial applications.

Mr. Gage's paper was a technical explanation of the standardization plan and the benefits to industry and the public which it hopes to achieve in reducing costs and increasing efficiency. He illustrated his talk with a demonstration. R. M. Evans of the Eastman Kodak Co. is chairman of the SMPE delegation to the Color Council.

Audience Din Annoys

● Movie goers visit the film palaces to be entertained, and they enjoy themselves to much that the noise they make poses a problem for the industry, according to a technical discussion before the Spring Convention of the Society of Motion Picture Engineers.

Audience noise level has been found to be a serious restriction to the volume range of motion picture dialogue because it averages eight decibels louder than the almost inaudible noise level of the sound reproducing equipment itself, according to W. A. Mueller, technician at the Warner Bros. First National Studios. This represents almost 10 per cent of the audible range of the ear.

"A series of noise measurements was made in theatres to determine the cause of low intelligibility of dialogue recordings of wide range," Mr. Mueller said. "Audience noise is an extremely variable factor. Measurements made in the same theatre showed it to be as low as the film noise level in one instance and later to rise to 14 decibels above this value. To secure good intelligibility of motion picture dialogue, the volume range must be compressed so that the softest spoken words never are so low as to be seriously masked by audience noise."

A plea for standardization of film splicing practices was laid before the Convention by W. H. Offenhauser of the Berndt Maurer Corp., of New York.

Mr. Offenhauser discussed what is known in the industry as "blooping" sound film —that is splicing ends of the film in such a manner that there is no interruption in the film sound nor any audible noise when the patched portion of the film pases through the projector.

"Each motion picture producing organization has independenetly arrived at some rule-of-thumb solution to its particular problem rather than any directed effort on the part of the whole industry," he said. "A wide variety of bloops are in use and a reduction in the number of sizes and types seems desirable in the interest of simplification."

Mr. Offenhauser pointed out that there is almost complete agreement on the characteristics of the practice and that standardization should be relatively simple.

C. C. Potwin of Electrical Research Products Inc. told the Society Acoustic science can now be applied to better advantage than ever before in the planning of motion picture theatres in his paper on "The Control of Sound in Theatres and Preview Rooms." "A broader understanding of the purposes and principles of acoustical design and treatment is needed however to make this application universal."

Mr. Potwin pointed out that greater attention should be given to the design and development of the basic theatre structure. He said: "The all too prevalenet idea that 'the more acoustical material used the better results should be discouraged."

Television Camera Research

● Research aiming to take the 'guess work' out of television camera technique and thus assure more perfect reproduction of original scenes on home television receivers is being carried on in the RCA research laboratories. Dr. I. G. Maloff told the Society of Motion Picture Engineers convention last month.

Dr. Maloff who has been engaged in television research for many years, explained that television has reached the point of technical development where the fine points of shading in studio or outdoor scenes being televised have become the object of intensive research. He indicated that because of the greater flexibility of the electrical signal as compared with photographic emulsions, lighting effects unobtainable at present in photography may be achieved in television.

"At present a skilled television cameraman can assure his audience a remarkably accurate reproduction of the original scene being televised because of his great experience and technical knowledge," Dr. Maloff explained. "We are attempting to develop an automatic system which will place less responsibility on the operator and at the same time assure a better illusion of reality at the television receiver."

The 250 delegates at the convention also heard Major E. H. Armstrong of Columbia University tell of the development of the frequency modulation type of radio broadcasting which is now being treated in the New York area.

A companion paper to Dr. Maloff's was one delivered by Dr. Lloyd A. Jones of the Eastman Kodak Company who spoke on the technical problems of pictorial tone reproduction from a photographic standpoint. He summarized the work done to date to secure more delicate shading in pictures and pointed out that picture quality depends to a great extent on proper camera speed as determined by sensitometric graphs developed in research laboratories.

The Convention attended by delegates from as far away as the Pacific Coast and including some of the most famous engineering experts in the motion picture industry, was also addressed by John A. Maurer of the Berndt Maurere Corp., on the growing use of 16-millimeter motion pictures in commercial fields.

He declared that the advantages of 16-mm film in terms of simplicity, portability and freedom from fire risk has led to economies that have been decisive in opening up vast new fields for motion pictures in industrial applications. He used several recent films to demonstrate his talk.

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tion pictures directly in the 16-mm size has increased rapidly during the past few years," he said "The smaller film size is particularly adaptable to the production of those types of industrial films which are photographed in the field or factory rather than in the studio"

Television Strides Told

● A new method of synchronizing television transmitters and receivers, which makes tuning simpler for the home user and a new lightweight portable television pick up system which replaces two truck loads of bulky equipment were explained to delegates attending the Spring Convention of the Society of Motion Picture Engineers

The new devices were described during a Television Session of the convention In all five technical papers were presented by representatives of the Don Lee Broadcasting System of Los Angeles the National Broadcasting Co., the RCA Manufacturing Co the Columbia Broadcasting System and the Allen B DuMont Laboratories

A new type of synchronizing wave-form which keeps the television transmitter and all receivers tuned in to it operating together makes possible automatic synchronizing of the receiver at variable line and frame frequencies, according to a technical paper presented by T T Goldsmith, R L. Campbell and S W Stanton of the Du Mont Laboratories. The paper further points out that line and frame scanning frequencies need not be frozen to a standard giving limited definition performance since the synchronization system may be arranged to allow flexible operation

From two 10-ton trucks loaded down with bulky equipment to a few suitcase sized containers that fit with ease into a station wagon is the story of the development of new television pick up equipment described by G L. Beers, of RCA Manufacturing Company O H Schade of RCA Radiotron Corp and R E. Shelby of the National Broadcasting Company

Used to televise spot news events, athletic contests, parades, etc., the new lightweight equipment maintains the efficiency of its bulkier predecessor while costing only a fraction as much and having several times the flexibility In their technical paper the engineers described each unit of the small system including Iconoscope camera, control synchronizing generator antenna, and a 325-megacycle relay transmitter and receiver Each unit weighs from 40 to 70 pounds

The pick up system is used at the scene

of events being televised It picks up the television image and sound and relays them by radio to the transmitting station, where they are sent out over the air Any activity or event within the pickup's range of the television may be televised in this manner

The Television Session also heard the story of the televising of the Pasadena Rose Tournament Parade on last New Year's Day, told in a technical paper by H R Lubcke, of the Don Lee Broadcasting system Portable pick up equipment relayed the television images nine miles to the Don Lee transmitter, where it was put on the air Television viewers reported clear images despite a darkly overcast sky and occasional rain The sound portion of the television broadcast was heard coast to coast over the Mutual network

Quality in television pictures was discussed by P C Goldmark and J N Dyer, of the Television Engineering Department of the Columbia Broadcasting System Factors that determine the appearance of a television picture such as contrast, gradation brilliance and the shape of the scanning spot were discussed in the light of present television standards

W C Eddy, of the National Broadcasting Company New York, told of a new remote control television lighting system which makes possible more effective studio programs

Theatre Projection Developments

● An arc light employing radical new electrical principles to achieve brighter, clearer screen images in theatres was described at the Spring Convention of the Society of Motion Picture Engineer The new arc, together with a new system of light projection, produces a more brilliant image on the screen with a total absence of flicker, the convention heard

C S Ashcraft, of the Ashcraft Manufacturing Co, Long Island City, explained the new development in a technical paper read before the Convention The new method of light projection is known as the 'Cyclex System' and is based on a method of coordinating light impulses and projecting them through a rotating shutter to the screen There is a total absence of the periodic visual beat which has heretofore characterized alternating current projection arcs, he said

At the same time there has been developed a distinctly new type of alternating current arc which operates with a greatly reduced power input producing several operating economies Mr Ashcraft also explained the technical points of a new type of power conversion equipment which has been devised to operate the new arc and light projection system

That the motion picture industry feels an active concern for the proper projection of its films before the eyes of American movie goers was demonstrated by the ten other technical papers on projection problems and their solutions which were read and discussed by the Convention

Starting with a history of movie booth equipment from the early "coffee grinder" hand turned projectors to the present day streamlined masterpieces of efficiency, they reviewed the projectionist's end of the industry thoroughly

I Gordon, of Akron Ohio, discussed the problem of oil left on film by projector mechanisms and suggested means of overcoming it The oil he said, spoils the moving image on the screen and tends to produce eye strain for the audience T P Hover, of Lima Ohio, closely associated with safety officials in Ohio, presented a paper on personal safety precautions for projectionists

W B Rayton of the Bausch and Lomb Optical Co, told of new lenses recently developed for projectors and W C Kalb, of the National Carbon Co, told of the evolution of projection lighting from the first flickering arcs to modern controlled lighting systems A C Downes, D B Joy, W W Lozier and R W Simon, of the same company, told of recent new developments in carbon arcs for projectors

The interest which projectionists take in auditorium viewing conditions of the theatres in which they work was discussed by B Schlanger, of New York City H Rubin of Paramount Theatres Service Corp, approached the projectionists' problems from the standpoint of supervision Final paper of the session was by J R Prater, of Palouse, Wash who spoke on the necessity for keeping accurate records of projection booth operations

"Film" Coating for Lenses

● A new technique which promises to revolutionize the uses and applications of optical glass in motion picture cameras and projectors microscopes binoculars and in scores of other types of equipment by reducing the light losses caused by reflection was described to the 250 delegates to the Convention of the Society of Motion Picture Engineers

The new development which consists of coating lenses with a transparent film of the order of a millionth of an inch thick was explained by W C Miller of Paramount Pictures Hollywood and is a development of Dr John Strong of the California Institute of Technology

By coating the lenses of a moderately priced set of binoculars Mr Miller said better aid to vision can be obtained than with most expensive instruments with untreated lenses The same holds true of microscopes and camera lenses of all types He said movie projector lenses treated with the new film show a 50 per cent increase in screen brightness Motion picture producers have found that only 64 per cent of the available light reaches the film when shooting' with cameras having untreated lenses Nearly all the brightness is photographed when the lenses are coated

Optical glass applications have to combat reflection which reduces thee efficiency of the optical system by robbing the transmitted light beam of from four to five per

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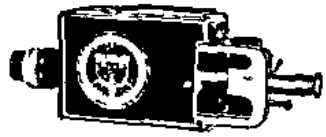
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BETTER THINGS *for* BETTER LIVING *through* CHEMISTRY

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By SIDNEY ZIPSER
Contributing Editor

★ **Another voice joins the chorus of boosters for the faraway isle of Bali, where the natives temper hard work with song and dance in an idyllic existence still unaffected by the tourist trade.**

BALI is a word that immediately conjures up lovely visions of feminine anatomy and the tourist publicity given it has not neglected this attractive feature, nor has any cameraman

With a curiosity and irresponsibility that many others possess I boarded a Dutch steamer of the Java Pacific Line and sailed westward, stopping at Honolulu, Manila, Cebu and Macassar, all interesting enough, but our next stop was to be Padangbai, in the southeastern part of Bali. The expectations aroused by this self contained little paradise were fever high, but the weather was a little disconcerting, as we hadn't seen the sun for nearly a week. When I say we, I mean a 16 mm a still camera and myself, all itching to lapse into a tropical reverie and stay there a week or more, depending on the mood and the finances

On the eventful day I was awake early and immediately stuck my head out the porthole. My eagerness was dampened by a gray sky, a leaden sea, and great wet drops of rain pouring down my neck. So with these thoughts in mind I pulled in my neck, dressed, and sallied forth to the upper deck

Imagine my surprise to see the sun trying to break through the clouds, which were low and moving swiftly. Suddenly they blew aside like a gigantic gray curtain and before me rose the sweeping GunungAgung, the sacred Peak of Bali, a symmetrical blue volcanic cone which dominated a luscious island of white beaches, palm trees and beautifully terraced rice fields

Quite naturally I dashed down to my stateroom and resurrected a couple of cameras and miscellaneous film and filters which in no time were smoking away

Dugouts with outriggers were rowed to meet us in the best romantic tradition. But a modern element had crept in, because while the men rowed there were some tempting gals aboard who would remove their blouses in a modified strip tease if we tossed them coins. As you can see the Balinese are quick to capitalize on their natural resources

There was no dock available for our large ship so we went ashore by a decrepit launch which made our little party feel as if we were really approaching one of those little gems of the South Seas untouched by the noise and stiffness of modern civilization

There were no girls to press close and hang garlands around our undeserving necks, as one elderly Romeo of our party expected. Disappointed, he complained of the lack of 'hospitality' and recalled the charms of some dusky maiden smiling in the closet of his better days.

A curious group of chauffeurs curio sellers and men about town greeted us. Their composure, courtesy and twinkling eyes were most refreshing, as you usually meet so many sullen, mean or bilious faces along foreign (or local) waterfronts. All we had to do was follow our luggage to a car bargain with the driver (one of the favorite sports in the Orient) and then race along good Dutch roads to Den Pasar the capital of Bali and center of its native life.

There are miles and miles of terraced rice fields, waving golden grain, crisp dry stubs, and tender green shoots breaking through quiet pools which mirror the blue sky, and the clouds and the dominant Peak of Bali. The terraces extend down river banks and up steep hills, an intricate endless pattern of moist red banks each supporting one of the kaleidoscopic stages of the grain. You see men in huge circular hats ploughing the fields with bullocks and primitive plough shares. Others pause along the banks with huge knives in their hands. Women extending in long human waves are picking and bundling the grain with quick deft strokes. Set squarely in the midst of the fields or atop conspicuous knolls are little walled enclosures surrounded by palm trees and containing finely carved red and gray rice shrines where offerings are frequently made to kindly gods.

Along the road was an almost continual procession of women carrying various loads on their heads: rice, cocoanuts, pottery, pineapples, baskets, mangoes and other delicacies. These women of all ages are the main means of transportation, as trucks and carts are rare. Their walking with these balanced loads develops considerable poise and grace, and as many of them are bare breasted and altogether charming the new tourist quickly develops a strained neck by ogling them from a fast moving car. Equally enticing, and much easier on your neck, are many charming little girls sitting by bamboo stands along the roads in villages, dispensing mangoes, papayas and other substitutes for hot dogs and Coca Colas.

Numerous villages are the centers of a highly developed communal life. Begging, unemployment thievery and educated chiseling hardly exist, and it is amazing and refreshing to find a group of people somewhere who can live so harmoniously among themselves and their environment. If a man gets tough or disagreeable he is simply kicked out of the community, a decree which is disastrous to him and therefore diligently avoided.

I omitted the hectic rehearsed "tours and planned a more leisurely examination of the island. The first few days I stayed at Kuda Beach in a very pleasant woven bamboo cottage where I could bathe in the surf and watch the sun set across the Indian Ocean. It was most agreeable and highly recommended pictures or no pictures.

Later I stayed at a Dutch hotel in Den Pasar located across the street from a fine old Balinese temple and from the porch of which I could see a constant stream of natives going to and from market rain or shine. Incidentally it rained about half the time I was there but later in the year corresponding to our summer, it is supposed to be clear. They have two seasons, wet and dry and an almost uniform temperature.

You are inclined to sit back in a chair with a Scotch and soda and wiggle your toes watching the world go by. I definitely felt like this most of the time relaxing and planning some heavy photography for manana, but eventually stirred myself to action.

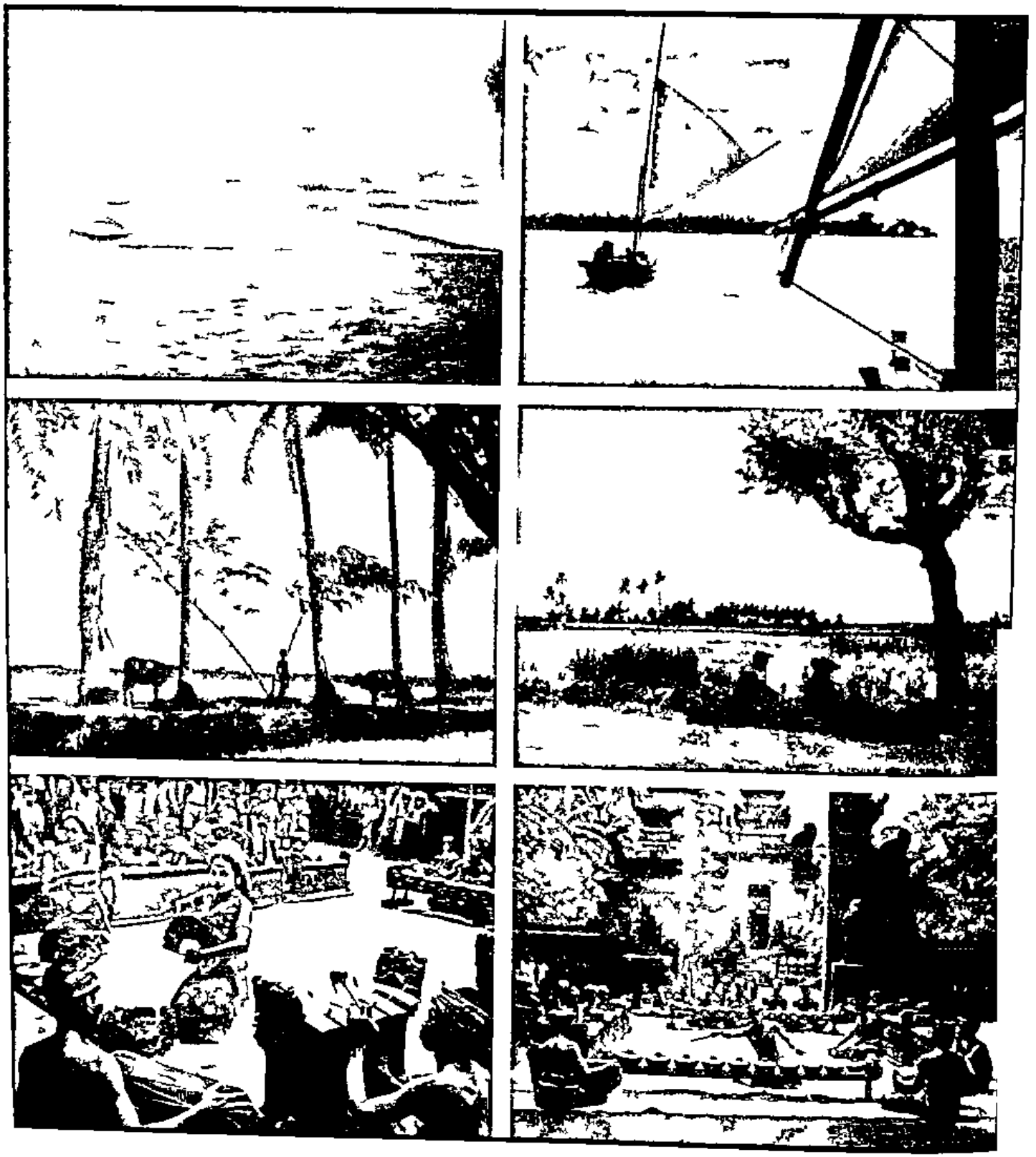
Bali is a photographer's paradise but you must have color film, even though you worry like the devil about it. There you find the most gorgeous backgrounds imaginable of green and gold rice fields, blue mountains palm fringed beaches, and dull red temples which are carved like jewels. Then the people are most natural

(Continued on Page 10)

Sidney Zipser contributing editor to INTERNATIONAL PHOTOGRAPHER *has just returned from an extensive tour of the Dutch East Indies and India where he has been shooting 16 mm in color and black and white, as well as still pictures of the natives and their civilization. He stopped at Baltimore where he shot first camera on the steeplechase based on the picture 'Maryland' made by Twentieth Century Fox.*

Zipser is a great booster for travelogues and says there is a wealth of this material all over the world.

—Editor's Note



Sunburst over Bali

Pastoral scene

Native Dancers

Native craft at Benoa

Rice cutters

Camelon orchestra

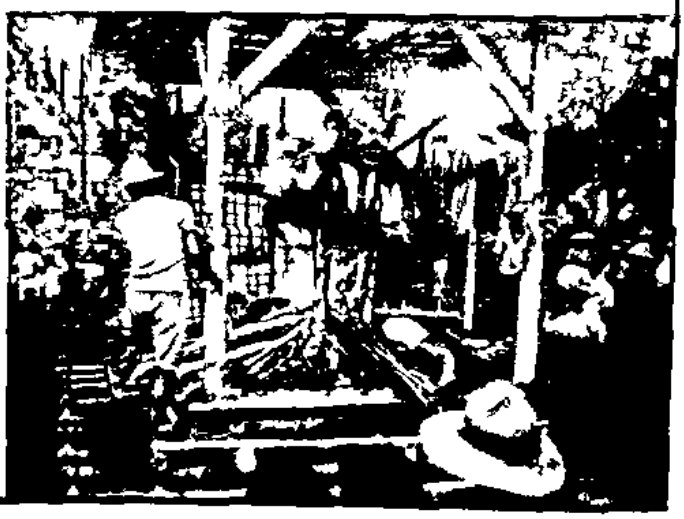












Pottery Bazaar

Lunch

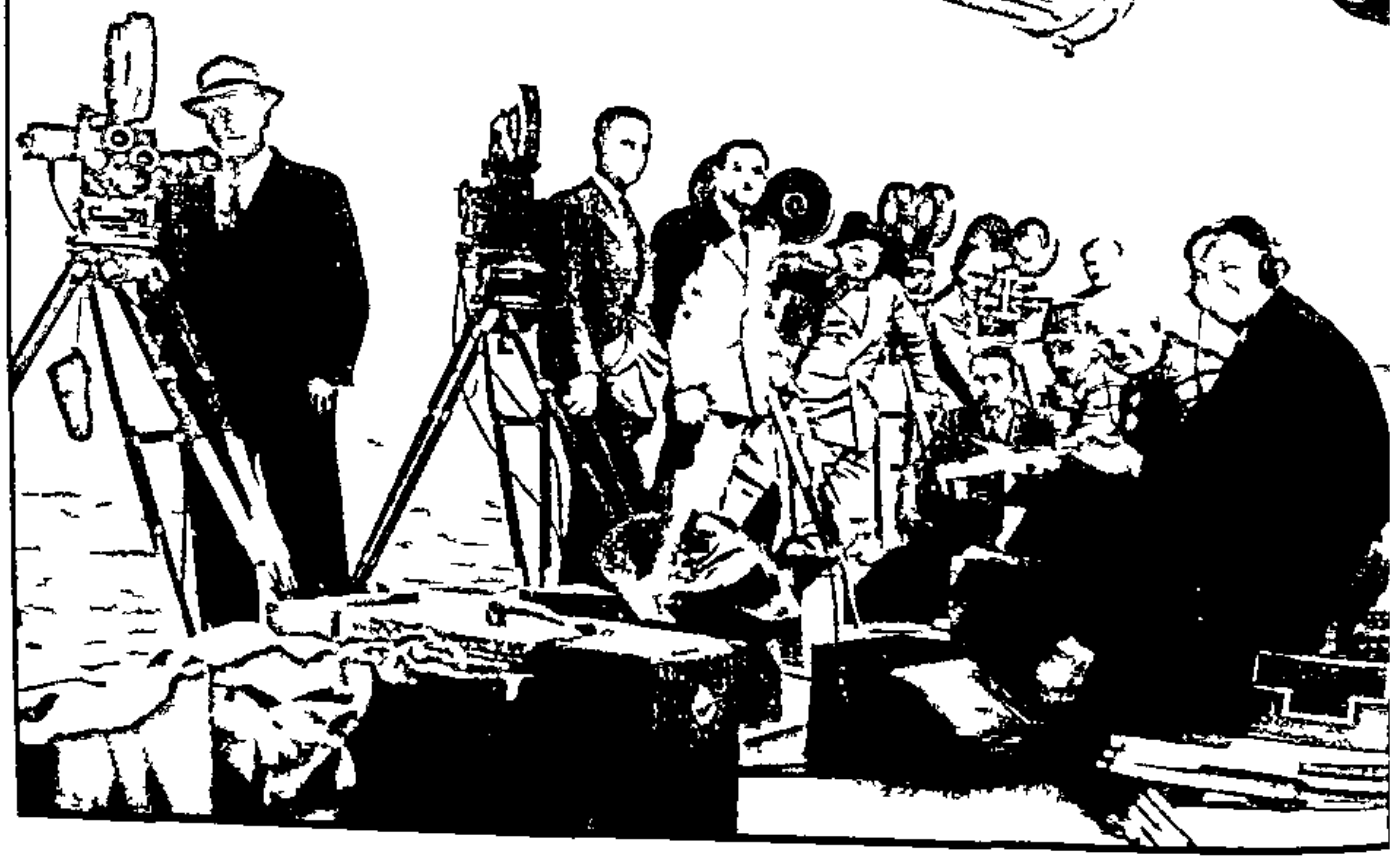
Preparing seven months old remains for cremation

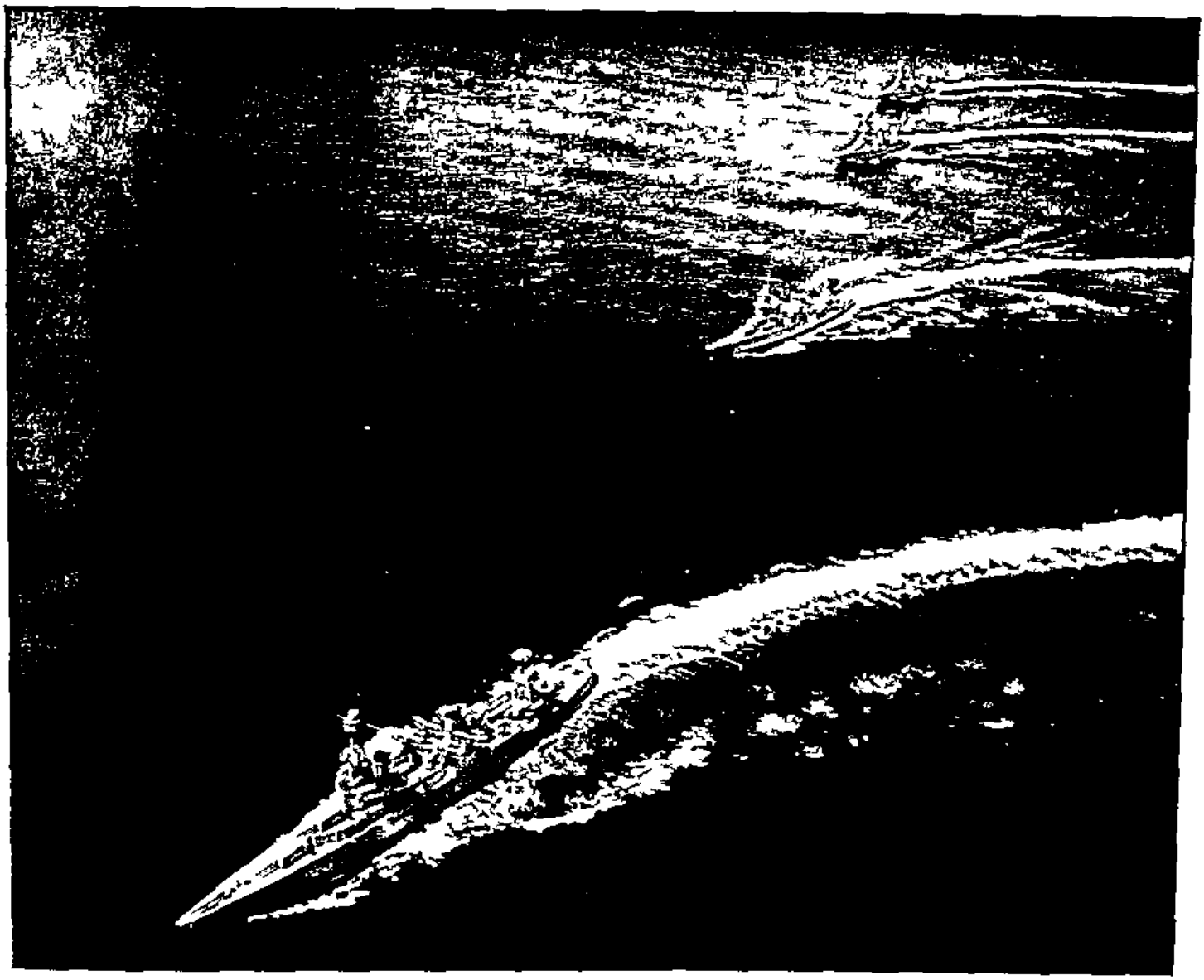
Pounding rice

Shopping

Cremation of a High Priest







FLEET TACTICS, U S N

Etching a pattern of rhythmic beauty that belies their ominous nature, heavy cruisers of Uncle Sam's naval force are shown above swinging into formation during recent maneuvers off the Southern California coast. These ships are typical of the high speed, hard hitting type which form the backbone of the battle fleet. When Secretary of the Navy Edison visited Los Angeles Harbor while on his flying inspection trip of naval units representatives of the five newsreel companies were authorized to go aboard the fleet flagship *U S S Pennsylvania* to record the ceremony of receiving the Secretary at the floating headquarters of Commander in Chief Admiral James O Richardson. The photo at left top shows the cameramen in action atop the aft turret of the battleship, shooting the approach of the Secretary's barge from the Long Beach naval landing. "At ease" in the lower picture are the history recorders (left to right) Mervyn Freeman Pathe, Marshall McCarroll (killed a few weeks later in an airplane accident) Paramount, Charles Lehman Movietone, News of the Day, Sanford Greenwald; Joseph Johnson and Dexter Alley, Universal, seated, Herbert Tice, Movietone soundman, and Willard Starr, Paramount soundman, standing extreme right. Jack Darrock, Movietone Pacific Coast manager.

Assuming that the complimentary mattes have been made in such a manner that they would normally come back into match the trouble generally experienced when it is necessary to move is because it is practically impossible to unload and reload the two units without moving them slightly I have it on no less an authority than Frank Young that you could carve a camera out of solid steel and it would still move on you With the above described setup all units could be set visibly and locked in position and the composite made in one operation If the optical was then run at a slow speed to eliminate vibration it occurs to me that you would stand a pretty good chance of completing the shot without even so much as testing

Now, if we can back up a bit to take up some further details of construction I believe we can find some further merit in such a machine In addition to the dissolving shutter on the camera I would arrange a dissolving shutter on both unit 'B' and 'D," and have a flexible shaft or some other suitable means of fading one unit out as the other unit faded in, which would permit the making of lap dissolves in one operation In case a more detailed explanation might be necessary this would be the procedure You would line up the lavenders or fine grain prints, as the case might be in two rolls overlapping the scenes as you would in standard practice loading one roll on a common start mark in unit B and the other in unit D With the shutters on the respective units working opposite each other you would start shooting with unit B's' shutter open and 'D s' closed At the proper count you would start the fade out on unit 'B," which you would be shooting through the 50 per cent transmission angle mirror and unit D' would fade in and be picked up through reflection There would be a little matter in unit 'D' of turning the positive around to compensate for the turnover of the mirror and moving over to take care of the sound track

In making wipes with the same set up the line up and thread up would be identical, but both shutters would be left open The 50 per cent transmission mirror would be replaced by 100 per cent surface mirror and this mirror would be moved across the field in the direction you wished the wipe to occur To start with, for example, you would be shooting direct into unit 'B' with the mirror in its slide but outside of the path of the lens Unit "D' is now running in sync with unit "B," but as there is no mirror to pick up its rays they shoot across the path of light of unit B and are lost As the mirror is advanced across the field of unit "B' it mattes off unit 'B' in the same amount that it intercepts unit 'D thereby replacing the image from Unit "B" with the one in Unit 'D' Since the edge of the mirror that accomplished the cut off is necessarily some inches from the focal point of the camera lens it would be out of focus thereby creating a blend

Another method of combining split screen shots would be by lining the two scenes to be combined in Units 'B' and "D' and scraping the reflective surface from a 100 per cent mirror at the point you wished to join the two scenes

There are many other features I should like to incorporate in an optical, but this will do for now If I can find someone with a pencil I will try to have a drawing made which might help

Laps 'n wipes

By MAURY HUGHES

Pacific Title and Art Studio

WHAT is a lap? Many people, especially wives, will immediately think it is the place where hubby's stenographer sits to take dictation In motion picture parlance it is used to indicate an overlap dissolve whereby one scene smoothly blends into another, suggesting a lapse of time or to eliminate uninteresting footage in moving characters from one sequence to another

Many old time cameramen remember laps as a constant source of annoyance, inasmuch as in those days it was necessary to photograph a scene, make a fadeout at a designated point in the action, keep a record of the counts, rewind the film and can it until such time as the next action was filmed, which may have been days or weeks In the course of production this often resulted in a file of eight or ten cans awaiting completion The advent of sound eliminated this condition even if it did bring other complications so the production cameraman is no longer bothered with "laps" Sound created many new specialized jobs in the industry and a not unimportant one is the making of laps, wipes, trick effects and montages All this brought into more active use the optical printer, which is nothing more than a re-photographing machine, making a copy of the positive film through a lens

To the layman or the average theatre goer, a lap dissolve passes unobtrusively by on the screen without his being aware that it happened A lap dissolve serves the purpose of smoothly advancing the story To obtain this smoothness calls on the expertness and ingenuity of the operator and the laboratory technician, greatly aided by the film manufacturers' introduction of new raw films designed for *the processing* of duplicate negatives

When we realize that a lap dissolve is a dupe negative that is cut right into the original negative it can readily be seen that it must compare with the original in register, quality and synchronization It must be in register so that the size or position does not jump It must compare in photographic quality so that gradation and density will remain constant when printed on the same light as the original and of course it must remain in sync with the sound track

Where laps aim to be smooth and not jarring a wipe or wipe-off strives for a noticeable or theatrical effect Wipes are often used in productions for this purpose but find their greatest effectiveness in trailers, announcements, etc They embody the same pains taking care and procedure as laps but in addition make use of the travelling mat This travelling mat carries the design of a particular wipe effect and it requires two sections, the first, or take off mat, is used so that it covers or causes *not* to be exposed that section of the raw film where the second image will be placed The second or bring on mat is tha direct opposite of the first, being black where the other is transparent The types and designs of these mats are myriad and range in length from one-half *to* six or *eight feet Each one* is designed for a particular purpose or effect

The optical printer is the instrument used for the cooperation of the various mediums to obtain the desired results

Many a novice in the motion picture industry has been initiated by being sent for the 'Film Stretcher" and it often resulted in quite a search, as those "in the know' shunted him from studio to studio in search of this mythical device

Today the optical printer might reasonably be called a "Film Stretcher" because of its adaptability of operation Many a foot of film has been lengthened by "stop frame" or by photographing a duping print forward and backward, action permitting, of course The optical printer's uses as well as its designs are many, but fundamentally the same Many operators have devised gadgets such as mechanisms

TOM BROWN'S SCHOOL DAYS

By FRED HENDRICKSON
Member, Local 659, IATSE

WHEN Headman Eglinton of the RKO camera and still departments assigned me to handle the still shots on "Tom Brown's School Days" I was very pleased at the prospect of again working on a Gene Towne and Graham Baker production This was their second at RKO and I had worked also on their first on this lot—"Swiss Family Robinson"

The photography was in the capable hands of Nick Musuraca with Joe Biroc operating the camera and Teddy Winchester as the assistant

There was very little action in the picture, so most of the stills were the regular posed 8x10 shots The biggest problem in getting stills was to get the boys to hold still long enough to get an exposure without someone moving and spoiling the shot We had from 10 to 50 boys ranging in age from 8 to 18 and they wriggled around as boys always do That was fine for the movie camera but not so good for me However, with the help of San Ruman the first assistant director, who is always very helpful to the still men, we got the shots without too great a loss from movement

The fight that takes place in the picture between Jimmy Lydon, who plays Tom Brown and Billy Halop, who plays Flashman, the bully of the school was the high light of the picture as far as I was concerned I knew the publicity office wanted some good action shots of the fight, and it would have been fine for me if it had been staged outdoors Then I could have shot as fast as the action called for It was however, an exterior built on the stage and as Nick used plenty of light to give the scene that exterior quality I was able to shoot at one-hundredth of a second at F15, and by watching the action closely and shooting during the slight pauses I got some very good shots

The experience I had shooting action stills during the silent days came in very handy We used to shoot stills during the action with an 8x10 camera at 1/25th of a second and we had to wait for a pause in the action and then press the plunger There are pauses in the most violent action and if the hand is quick to follow the eye it is possible to stop the action even at a slow shutter speed

In order to get some shots with a greater sharpness and depth of focus after each scene I got the boys to fight for me and shot them with the graphic camera and flash bulb

The graphic camera came in handy for the scene where the bullies roast Tom over a fire in revenge for his getting the best of them We shot the scene from the back of the fireplace shooting through the fire to the faces of the boys I was afraid that the flash would wash out the flames, but by getting very low (on the floor in fact), I was able to point the camera up enough so the flash went over the flames to the faces of the boys It has been my experience that the graphic camera and flash bulb is just about the most useful camera a stillman has

The picture was a very interesting one to work on as it is about a real school and real people—Rugby, in England—a school that has been there for hundreds of years and is still in use Our director, Robert Stevenson is from England, and was very careful to have every detail correct

The fight scene was the one that impressed me most, I think It was a rough and tumble schoolboy fight, but it was done in a very formal fashion A regular challenge was issued and a time set for the fight The boys formed a ring and chose two timekeepers one for each faction They fought regular rounds and each fighter had seconds with water buckets and sponges to revive their man The English do everything in a very formal fashion even to schoolboy fights

The picture was a very pleasant and instructive experience for me and I hope I can do another as interesting

The Author

● In 1915 Fred Hendrickson started with the Kalem Company in Jacksonville Florida as assistant cameraman At that time the first cameraman was director of photography operative cameraman and still man During those days a feud existed between Florida and California and strenuous efforts were made to keep the picture business in Florida rather than let it go west However there was no disputing the fact that Florida lacked scenery and could offer only flat tropical backgrounds The mountain type Westerns and other great out of dooors pictures could not be staged there and for that reason Florida lost out

Fred returned to the Vitagraph Studios in Brooklyn where he became Corrine Griffith's stillman After that he worked on "Chronicles of America" made by Yale University Press and dealing with the history of America in motion pictures Fred was the assistant and second cameraman on that picture In 1924 he moved to the Paramount Studios in Long Island which was Famous Players Lasky Corporation In 1926 he began shooting stills and continued at this job until 1927 when he came to California to work for Paramount on the West Coast From there he moved over to RKO in 1929 under the genial and understanding portrait artist, Ernie Bachrach, where he has been ever since

Fred is a firm believer in 4 x 5 action stills and thinks they give the best results He is hopeful that the day will come when 8 x 10's will be banished from the lot and every stillman will be permitted to use a 4 x 5 in preference to any other camera He is an enthusiastic worker in Kodachrome and believes that color stills give the photographer a full opportunity to exploit the player and the scenery He has expressed his conviction that a properly exposed 4 x 5 negative will give an adequate blow up to an 8 x 10 print, which is his reason for thinking that the cumbersome 8 x 10 camera eventually will become obsolete

D A. Turns Tables

● George Brent has played so many doctors and lawyers in pictures that he believes that with a little study he could be a success in either of these professions Currently, he is again an attorney in Warners' "The Sentence"

As assistant district attorney Steven Forbes, Brent is shown in the cover photograph as he delivers his final summary in a murder case On purely circumstantial evidence he is endeavoring to convict Gerald Wilson (David Bruce), clerk in the Martin Box Factory for the premeditated murder of Robert Varney, trusted and faithful cashier of that company

When Brent delivers these words to the jury, he realizes he has practically won the case for the state "And so I say to you that when circumstantial evidence reveals an orderly, inevitable progression from cause to effect it's as valid as the law of mathematics One and one make two and another one makes three whether you see the actual figures or not"

The jury is only out a half hour before bringing in a verdict of guilty

Five minutes before the boy is slated to go to the chair, the night watchman of the company confesses to the crime Every effort is made to reach the warden's office to save the innocent boy before it is too late but the boy is electrocuted and Brent feels as if he himself is a murderer. He resigns from the district attorney's office to become a criminal lawyer His new philosophy is that he would rather see a hundred guilty men go free than to see one innocent man die





TOM BROWN S SCHOOL DAYS—Camera Crew Nick Musuraca, first Joe Biroc operative and Teddy Wincl ester assistant Robert Stevenson, d rector The series of stills by Fred Hendrickson starts with Jimmy Lydon as Tom Brown, off for Rugby





Tom s cap shocks the sensib lities of Freddie Bartholomeu who wears the traditionally correct high hat (Right) His first day at school Tom is put on a spot when he is handed the sl ngshot used by the other lads after they accidentally hit a professor





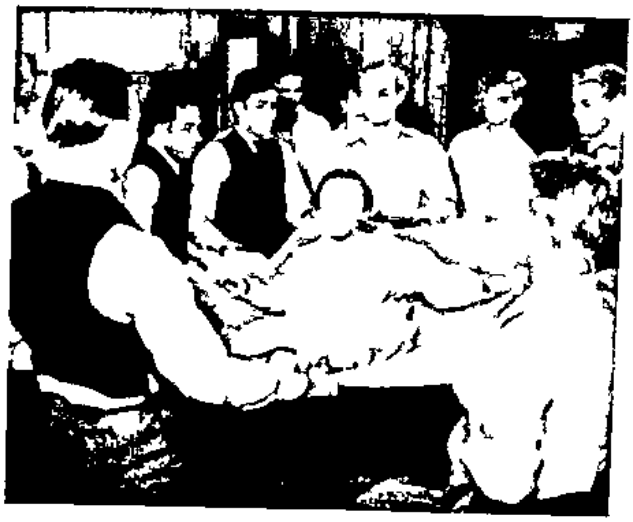
Rugby boys consuler baked potatoes a great del cacy as served at "Sally s Murphy Shop" the English counterpart of American youths "Sugar Bowl" (Right) Tell ng the truth brings Tom the ordeal of a terrifying heat treatment by his angered schoolmates





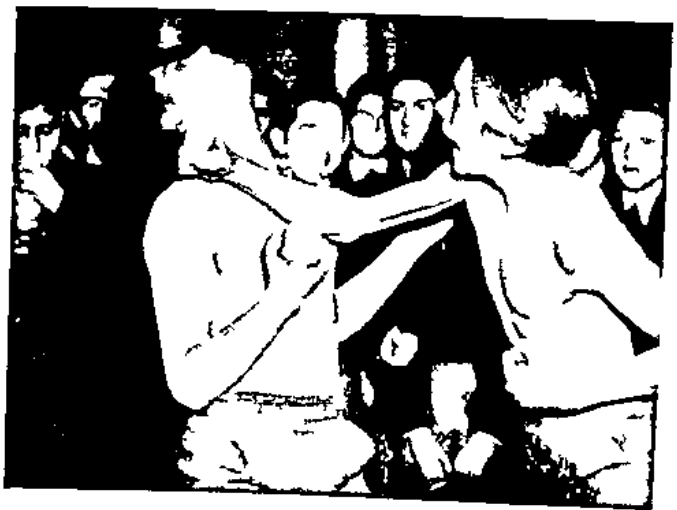
The ar val at tl e famo us old Engl sl school ma ks the sta t of a ne phase in tl e l fe of Tom B o n One of his fi st nt o duct ons is to the stern headmaster D A nold played by S Ced c Ha duicke sho at desk n c cle above





Tom s ha ng nclu les l a ng to stand up and s ng thout stopp ng h le e eryth ng poss ble s done to nte rupt h m If he aps he penal y s to drink a p nt of salt a e (P ght) Be ng to ed n a blanket al o is part of the ha ng cu culum





If e be ng pi shed a ound just so fa Tom del be ately in ul s "Bully Flashman (B lly Halop) and challenges h m to a fight The resul ng bout s n tl e best scl oolboy t ad t on u th plen y of act on and l tle science Tom finally ge ng tl e nod



Su ting the mood of exaggera ed a ng tha one of he laugh provok ng fea ures of the RkO produc ion "The Vi lain S l

Pursued Her" the photograph abo e are excellen studies real e posing S llman Emmet A Schoenbaum member Local 659 IATSE, resisted the temp ation to indulge in "a



photography in favor of present ng the players in expressions and manner typical of the era which they reenact (Top panel left to right): Allan Mowbray Joyce Compton Billy Gilbert Hugh Herbert; (bottom panel) Buster Keaton Franklin Pangborn Anita Louise William Farnham.

THREE MEN AND A BOAT

By ROY PURDON
(The Sandbar Skipper)

★ **Being the account of a voyage in Mexican waters by a camera enthusiast whose enthusiasm was dampened—although only temporarily—by a hair's breadth escape from being wrecked on a hidden reef.**

ONE afternoon the 10th of November to be exact I met an old friend of mine at Grand National Studios in Hollywood—Thos H Ince II He told me that he had just purchased a thirty eight foot schooner yacht and would like to make a trip south That's how it started I had my own motion picture equipment, so we decided to make the trip and at the same time make one or two short subject motion pictures

After that momentous decision we took the RIK, his new boat out for a shakedown trip Frankly, I literally tried to tear the ship apart, but she seemed to be a tough little boat and took it grand We had a hard time finding space to store our bountiful supply of provisions We filled every closet corner and bunk and finally pulled up the floor board and filled the bilge

We decided that we should have a third man with us so after much hustling around and elimination of would be travelers we located Joe Dion who had sailed with us on the Edris about fifteen years ago

Friday morning found us at the U S Customs at San Pedro trying to get clearance papers but the officials there told us we did not need to clear as long as we were not carrying tobacco or liquor with us However upon his advice we scurried around to find a broker to arrange for our passports The broker sent over to the Mexican Consul and the required documents were in our hands I would advise anyone making a trip south to do this as it eliminates a lot of red tape on future days of your trip

At last on Saturday morning we were ready to go and pulled away from the dock out to the oil barge where we fueled up for the trip taking on a capacity load of one hundred and seventy gallons of gas besides two five-gallon tins to be kept in a case on the deck We also took six quarts of oil and two cans of cup grease

At Cedros Island we inquired about the sea elephants and found that the Muy Grande Lobos were on the Bonitos Islands about twenty more miles out at sea As we wanted to photograph them we left Cedros and headed for San Benito where there are some of the worst rocks and shoals on the coast. We anchored in a cove on the southeast side of the West Island, where there is a water tank and a shack, belonging to the Mexican Government Lighthouse Service as there is a light on the northwest end of the island A few days later we saw two men down by the shack Upon going over to them we found they were the lighthouse keeper and his helper They greeted us warmly and were very courteous. Although they could speak very little English and we could speak no Spanish at all we got along fine and they had dinner with us on the boat

We found that they came down for water every few days and traveled over the hills with the burros and pack it back in five gallon cans to the lighthouse We made an appointment with the lighthouse keeper to take us to the East Island in the morning as he had a large skiff and could make the trip very easily with all of us in the boat besides the camera equipment The lighthouse keeper rowed like all Mexican fishermen by standing up and facing the bow We landed on a small rocky beach and pulled the skiff out of the water then removed the camera equipment which we pulled up the cliff by ropes and started off across the island

After a long hard climb over a steep hill we descended a ravine into a cove on the east end of the island In this cove were a large herd of sea elephants sunning themselves There was an enormous bull weighing four or five tons and several cows weighing maybe 500 or 600 pounds apiece We set up the cameras and spent six hours getting various angles, well pleased with the excellent material that we had to work with

We left the Benitos and set our course for Cedros once more, pulling into the village after dark after bucking a big swell all afternoon With a strong wind blowing into the island and with a big swell we found our anchorage very uncomfortable so at 9 p m we pulled out and headed for Scammon Lagoon where we had been told that there were "sta wano mucha grande Turtaloes"—big sea turtles—and we wanted to photograph them

As we approached the mainland of Lower California so that we could see it we turned north and traveled until daybreak when we were just outside of the reef that bars entrance to the Lagoon Crossing the bar we were in quiet water and surrounded by giant sand dunes Scammon Lagoon is a large body of salt water that rises and falls with the tides It has many branches and extends about 35 miles inland

As soon as we had anchored we went ashore I have never before seen such sand It was very white and as soft as flour When you walked in it you would sink ankle to knee deep even by the shore where the sand was apparently packed down by the water

After lunch we started to go up the west branch of the lagoon and it was here that I got my nickname for the trip I ran into a sand bar four feet under water at low tide not hard but hard enough to stop us Knowing that when the tide came in we were going to have that current again we lowered the skiff and put a stern anchor out and it was a good thing that we did too for when the tide did change it came in with a roar and a wake two feet high

By pulling on the anchor rope and with full speed astern we came off the bar rather easily and started up the channel with a little more precaution For the rest of the trip I was dubbed the Sandbar Skipper We used our lead line with great success and had several narrow squeaks but did not go aground any more We came abreast of a good sized sandy island that was covered with birds We had to chase the birds off so that we could land We found out afterward that it was one thing that we should never have done as it is much better to have the birds on the island with you than in the sky flying above you

We would anchor at an island or by the mainland at night and travel on up the lagoon by day By the third day we had gone 23 miles We saw only four turtles in the five days that we were there but they were all swimming and we didn't get a chance to get close to them Finally we decided to go back to Cedros Island intending to go out with the tide in the morning

There was a head wind and it was blowing good outside so we were under power—no sails up The run out past the entrance and down the same channel we had come in was made okey, that is up to the bar—and that is where it started

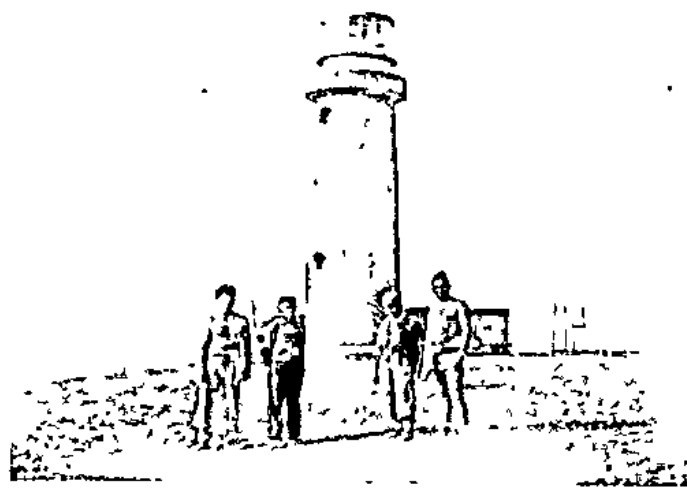
Big breakers curled all the way from the shore to the reef and no channel to go out I turned for the reef or rather to the point where the reef and the land met, as the breakers looked smaller there Joe was at the top of the foremast in a bosn chair Tom was using the lead line forward and I had the wheel Joe called out that he could see no opening in the reef At this point we were only

PHOTO RECORD of PURDON'S TRIP

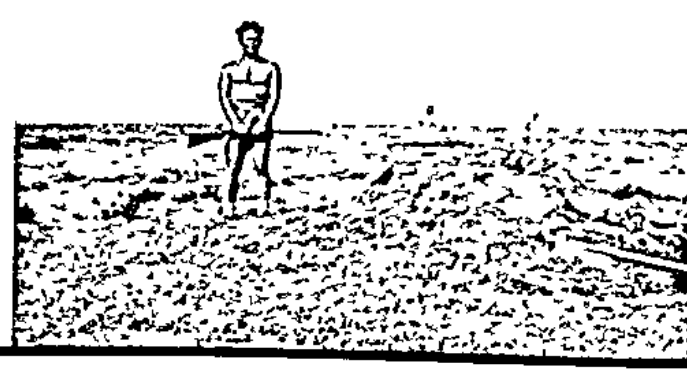












No ocean trip complete without some fishing too
Off to the lighthouse on West Bonitas Islands
Tom gets the lighthouse keeper's goat—literally

Sunrise over Cedros Island, eighteen miles distant
Lighthouse and keepers, flanked by Tom and Joe
Tom Ince at old grave on island in Scammon Lagoon

50 feet from the breakers And they really were big—cresting twenty feet high before they broke I eased the motor to full speed ahead and sung out "here we go" and at the same time Tom called out that we now had twelve feet Well it sure looked as though we were in for it

At this point we had no chance to turn back as we would roll over if one of those big waves caught us sideways Tom dropped the lead line and in some way got his arms around the mainmast Joe up top was telling me to give her the gas which I already had on full I last The RIK rose to the first wave like the good boat she is and just as we reached the top it broke under her and we went back fully twenty feet before we were on a level keel again The second wave broke completely over us and from then on until what seemed eternity we were never on a level keel All we could do was to hold on As for the others I think that they thought the same as I—that this was the end We were so high up on one breaker that we dipped our skiff full of water as it hung from its davits off the stern We knew that we were in very shallow water over a reef and we were expecting each wave to let us down on a rock or the bottom

At last we got to where we had only one more breaker to make the sixth There was nothing to do but hold her straight and into it As it rose up in front of us, light green we could see the swirl of sand half way up in it and just to the right a big dark spot—a rock—and did I pray both here and after

Well we cleared it but I still don't know how Once in the clear deep blue again we made coffee and drank plenty of it—not having anything stronger I have never been so frightened in my life and I admit it In checking up we found that Joe had seen one of our best poles and reels and a blanket go overboard. Also Tom's sweater and shoes had gone over as had his Graflex camera As I look back now I can recall many occasions on this little piece of excitement where could have been taken the most effective photographs or motion pictures that a person could imagine However I was thankful then as I am thankful now that we made it with or without photos

Good old RIK proved her worth and did that little motor in her run sweet We picked a head wind and a heavy chop under power all night until we reached Cedros once more Then we decided to return to Benitos to make some more motion pictures The lighthouse keeper was pleased to see us again and invited us to the lighthouse Bright and early the next day we roped his burros and packed our camera equipment including the batteries to run the camera motors

On the rocky coast below the lighthouse there is the wreck of an oil tanker that went ashore five years ago It is the *Flying Eagle* and its bridge now is inhabited by a family of real eagles Oil from the old tanker still is floating around It has caused the death of hundreds of sea lions, whose carcasses and bleached bones are strewn along the beach One can hardly imagine a place of more desolation

The next morning we left for home via Ensenada and in doing so we knew that we were not going to have the easy trip that we did in coming down the coast as the winter swell had set in and we would be sailing "uphill" all the way home

As we had done ever since first reaching Mexican water we flew to our stern the good old stars and stripes and to our aft arm the Mexican marine flag When we could see the lighthouse keeper he was flying his colors and dipped them to us. We returned the courtesy by dipping ours

After a series of eventful experiences we entered Avalon Bay As I was getting ready to drop anchor I slipped on the deck and fell on a fishing pole and gave myself a beautiful black eye Very shortly we pulled out for San Pedro where we cleared quarantine and then immigration and customs and then up the channel to our mooring at Terminal Island We had been gone 32 days and got back four days before Christmas It really was some trip and the worst damage that happened to the boat was a little paint scraped off the hull But my eye I still believe that my wife doubts the story about the fishpole

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NEWS OF THE MONTH

Photographic History

● With the spotlight on paintings by Daguerre before he discovered photography on Daguerre's own camera on Victor Hugo's photograph album on such Victorian fantasies as a camera disguised as a rectie and on an array of miniature cameras used eighty years ago the Eastman Historical Photographic Collection—most comprehensive ever assembled to illustrate the growth of photography—was placed on display for the first time May 6 at the New York Museum of Science and Industry to remain there half a year

The exhibition has been selected from the cream of the very large Cromer collection acquired last year in Paris by the Eastman Kodak Company and from Kodak's own historical accumulation of the past sixty years The exhibits—various of them animated —are being arranged in a way to enhance comprehension by the public

This first showing of the collection opened with an invitation preview at the museum, which is in Rockefeller Center Thereafter it will be accessible to the public during museum hours

A motion picture Highlights and Shadows recognized as an outstanding documentary film will be projected in the museum daily to convey an impression of the place of photography in modern life and the methods of manufacture in the photographic industry Also on view will be examples of —

The camera obscura dating back to the years before it was possible to capture a photographic image Daumier cartoons concerning photography

Photographs by Fox Talbot inventor of the negative and positive process and therefore the ancestor of photography as we know it Apparatus for making photographs by the wet collodion process including several small portable darkrooms one erected as for use in the field

Historical material showing the development of roll film and roll film cameras Historical material relating to motion pictures and to color photography and among many other highlights typical equipment—and results—of 1910's horde of camera fans

Photo Contest Announced

● For years owners of Graflex made cameras have consistently distinguished themselves in winning prizes and recognition in photographic contests and salons sponsored by various organizations This year The Folmer Graflex Corporation gives owners of its cameras an opportunity to compete for $1500 in cash prizes in a contest created especially for them—the Graflex Golden Anniversary Picture Contest, running from July 1 through Labor Day

This contest is open to all Graflex Graphic Crown View camera owners(except employees of The Folmer Graflex Corporation its advertising agency and the immediate families of these employees) Entrants are invited to submit their work in any or all of five classes Portrait and Pictorial Action, News Industrial and Scientific, Color This latter classification includes transparencies only color prints not being eligible for prizes in this contest

In addition to a $250 grand prize there will be awarded to winners in each of the five classifications a First Prize of $100 a Second Prize of $50, a Third Prize of $25 a Fourth Prize of $15 a Fifth Prize of $10 and ten Sixth Prizes of $5 each—making 76 cash prizes in all Seventy five Medals of Award—fifteen in each class—will be presented to entrants receiving Honorable Mention

Judges for the $1500 00 Graflex Anniversary Picture Contest will be nationally known and will be announced at a later date

Warner Annual Convention

● Warner Bros' annual sales convention in Washington D C June 10 11 12 is slated to be one of the most unusual meetings in the history of the industry The convention (first motion picture convention to be held in the nation's capital) will be open at all times to Senators and Representatives who will be invited to attend all meetings and see for themselves how a major Hollywood company runs its business and sells its product

This is significant because the meeting is timed to coincide with Congressional hearings on block booking and anti trust investigations

All told more than 500 Warner representatives including executives from the European and South American sales departments and leading exhibitors from all parts of the United States are expected

Lecture On Color at U S C.

● The editors of INTERNATIONAL PHOTOGRAPHER last month received from Warrent Scott head of the Cinema department at the University of Southern California the following letter

It was very gratifying to have Mr Kevin Marcus one of your contributing editors, address our class in Fundamentals of the Cinema last Friday, on Color in Motion Pictures'

Mr Marcus began with a lucid description of the main factors in color as it relates to pigment and to light, and then went on to an illuminating discourse on color and light in photography—the way they are handled by the several most significant color processes The students were delighted with his personality, subject matter, and delivery, and we hope to have the privilege of having him with us again in the fall'

Mr Marcus is the author of several articles on color that have appeared in past issues of the publication and is completing another for the July issue Watch for it

Two Billion Dollar Business

● The Department of Commerce has released a bulletin which embodies a comprehensive statistical survey of all branches of the American motion picture industry Nathan D Golden chief of the Department's Motion Picture Division under whose direction the data were compiled pointed out that in every instance the figures presented were obtained from sources within the industry

Following are few outstanding statistical facts as revealed in the survey The financial worth of the American motion picture industry is conservatively estimated as in excess of $2 000 000 000 One hundred firms are engaged in producing motion pictures in this country producing an annual average of 500 feature films and 800 'shorts' at an estimated aggregate cost of $165 000 000

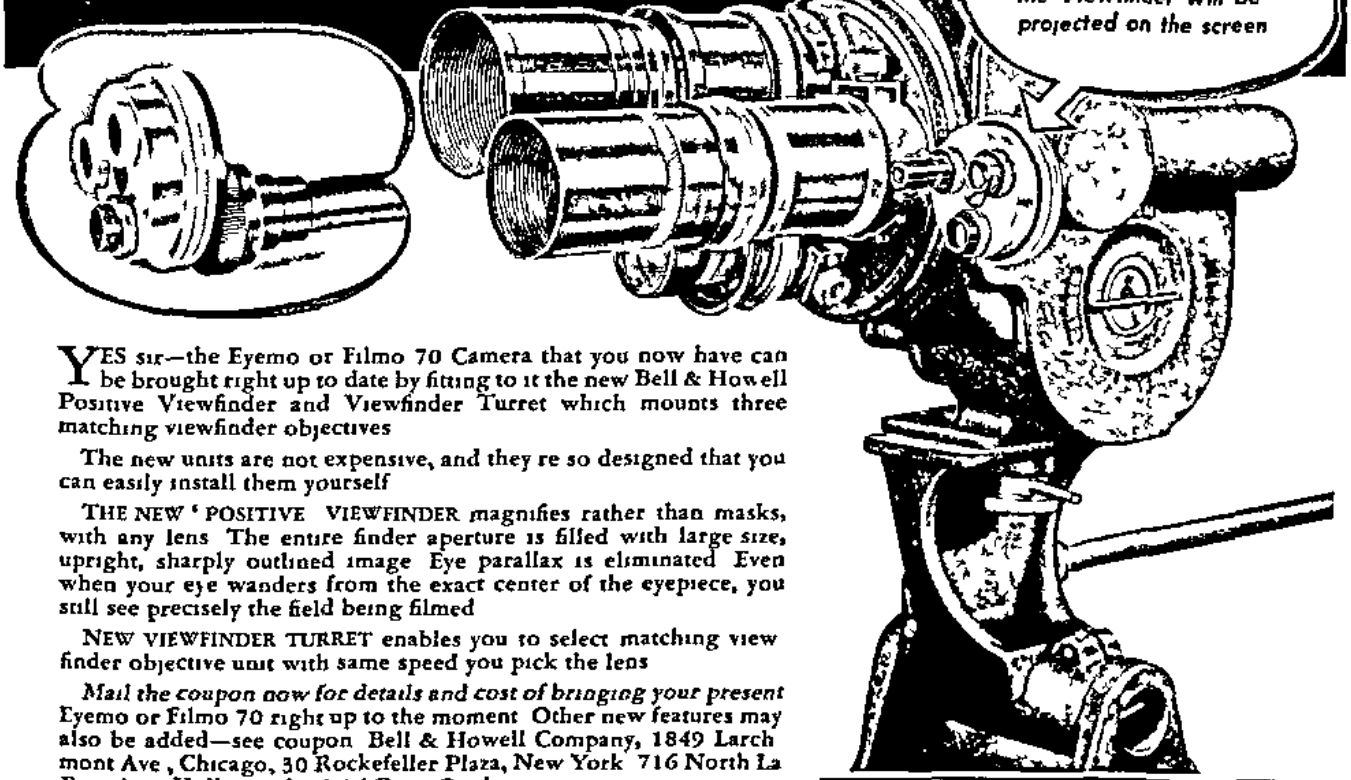
California accounts for 95 per cent of the total production the remaining 5 per cent being produced in New York Approximately 28 500 people in the United States are employed in motion picture production with Hollywood's annual payroll amounting to about $129 000 000 Between 100 and 250 prints of each feature film are required for initial distribution in this country and 276 separate industries arts and professions are involved in the making of a single feature picture

In the exhibition field 241 000 people are employed in 17 000 theatres operating in the United States which have a seating capacity of 10 462 208 Average weekly attendance at these treatres approximates 85 000 000 persons who contribute more

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...an $1 equivalent in yearly revenues at the box office. Film rentals paid by these theatres to distributors of motion pictures average over $250,000,000 yearly. For newspaper and magazine advertising the motion picture industry spends over $75,000,000 annually in the United States and an additional $33,000,000 in foreign countries.

United States productions account for 65 per cent of all the motion pictures exhibited in theatres throughout the world and approximately 35 per cent of total revenues received by American film producers for their productions is derived from foreign sources.

Back to Hand Crank Days

● A motion picture unit went back to the methods of 1910 production to photograph scenes for "Boom Town." The shots were made outside a Southern California oil refinery to work into a sequence in which Clark Gable, Spencer Tracy, Claudette Colbert and Hedy Lamarr watch the process of obtaining gasoline from crude oil.

To eliminate all dangers of fire the filming was done wholly without the benefit of modern electrical methods. Just as cameramen did in the early days of outdoor movies, the camera was cranked by hand, rather than being *motor-driven* as the practice is today. Lighting was done entirely by reflectors, lights and generators being barred from the ground.

OBITUARIES

● It is with regret that INTERNATIONAL PHOTOGRAPHER notes the passing of the following valued members and loyal friends of Local 659, IATSE.

Ernest S. (Hap) Depew, first cameraman, who was a veteran member and financial secretary-treasurer.

Bert Longenecker, first cameraman.

Marshall G. McCarroll, head of Paramount Newsreel on the Pacific Coast and a frequent contributor to INTERNATIONAL PHOTOGRAPHER. He was also a member of Local 695, IATSE.

Notre Dame Campus Visited

● To film authentic background scenes on the Notre Dame campus for the Warner Bros. production, "The Life of Knute Rockne," a film company headed by Pat O'Brien travelled to South Bend, Ind., last month.

In the camera crew from Local 659, IATSE, were first cameramen Rex Wimpy and Warren Lynch, assistants Charles Geissler and Jack Eagan, and stillman S. W. Crail. Several members of Local 666 were picked up at Chicago to assist in shooting the location footage.

Another Prize for Capra

● The Film Academy of France has awarded Frank Capra the Grand Comedy Prize for "You Can't Take It With You."

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TRADEWINDS

Filmo Master Projection Lens

● Bell & Howell announce that a new projection lens said to be ideal for difficult projection conditions, is available for the Filmo Master 8 mm projector B & H states that owners of the Filmo Master 8 will find this lens particularly useful when projecting unusually large pictures when screening during daylight hours in a room which cannot be darkened completely, etc The new lens is a well corrected 1 inch F 1 6 anastigmat and is claimed to produce excellent detail over the entire picture area It may be used in all Filmo 8 projectors now in use

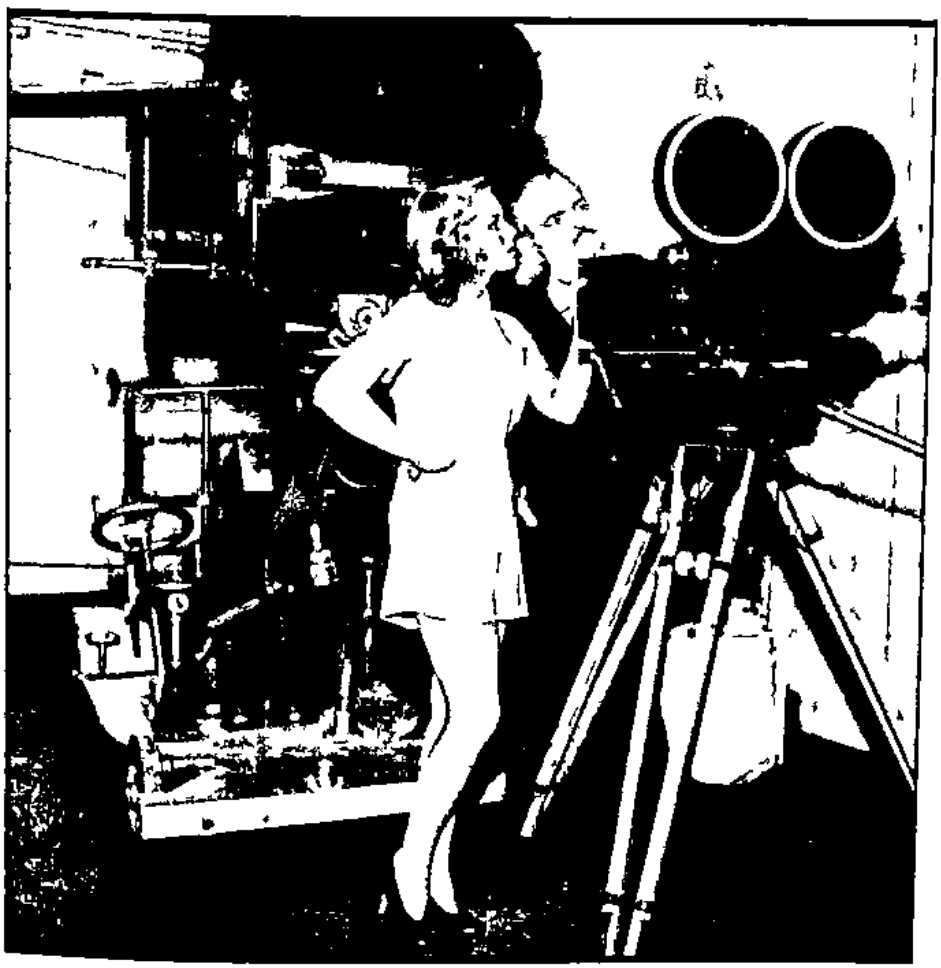
Professional Type Enlarger

● A new Solar Enlarger, known as the Heavy Duty Professional Model and available in 4 x 5 and 5 x 7 inch negative sizes has been announced by Burke & Jame , Inc 223 W Madison St Chicago

Especially planned for studio use, the new enlarger is built of heavy materials for durability The enlarger head is supported on a 3 inch chrome finished column with an adjustable cross arm permitting wide adjustment up and down or in and out Dustless type negative carriers are employed The bellows is double adjustable, providing an extremely wide focusing span and permitting the use of lenses from 3½ to 9 inches in focal length The light system employs double condensers Unusual rigidity and freedom from vibration is secured throughout The 1x5 model is priced at $89 50, the 5x7 at $112 50



Solar enlarger, equipped with sliding triple lens board and lenses which are extra accessories



Daniel B Clark studio director of photography shows Arleen Whelan 20th Century Fox starlet an experimental model of the new 20th Century Camera This camera, embodying revolutionary technical features, weighs but 100 pounds, including tripod In background is the present cumbersome blimp set-up which weighs 425 pounds without tripod First conceived by its inventors in 1934 the new camera passed through continued refining stages the past four years before it was turned over to the manufacturer Weighing only 15 pounds more than the old silent camera it will bring back to the making of motion pictures all its mobility

Improved Frame Finder

● Years of service in the hands of professional press and amateur photographers have proved the value of the wire frame finder provided on all Speed Graphic cameras For following fast action it enables the photographer to shoot with both eyes open and thus to anticipate coming action

Now the Folmer Graflex Corporation s new Anniversary Speed Graphic models employ an entirely redesigned frame finder This finder although it performs the same service as its predecessor has a perfectly rectangular shape more accurately outlining the field of view And it telescopes *behind* the camera s all metal front standard so that it is completely out of the way when not in use

Handsomely plated with bright chromium for better visibility and durability it not only gives greater convenience to the camera but better appearance as well

B & H Conversion Booklets

● Of interest to all owners of Filmo 16 mm projectors and of Filmo 70 cameras are the two "conversion" booklets just issued by Bell & Howell Illustrating describing and pricing all new features which may be added to older models these booklets describe methods of bringing camera or projector up to date

The projector booklet devotes four pages

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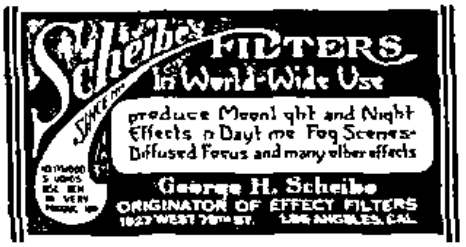
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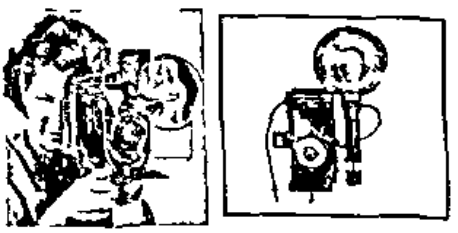
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to a discussion of increasing illumination by conversion to use modern high wattage lamps and goes on to describe the Magnibite condenser, pilot light centralized switch box and long focus lenses. In the camera booklet, the hand crank for making lap dissolves is discussed as are refinishing positive viewfinders, changing to different speed ranges, attached winding key, etc.

Bell & Howell will send these booklets to Filmo owners if the serial number of the camera or projector is stated in the request. Address Bell & Howell Company, 1801 Larchmont Avenue, Chicago, and ask for the 'conversion booklets.'

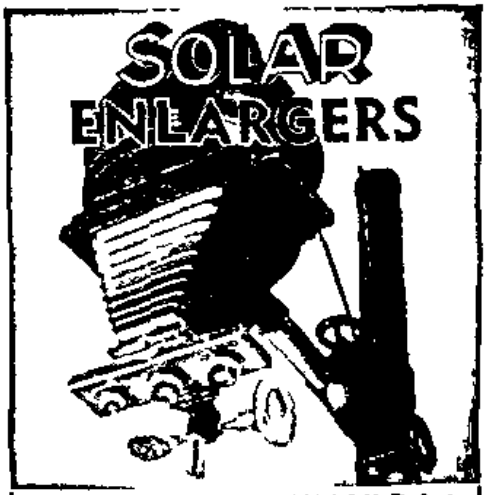
Agfa Memo Model Added

● Incorporating many features of the f3.5 and f4.5 Agfa Memo Cameras, a new, inexpensive model—the f5.6 Memo—has now been made available by Agfa Ansco.

This 35mm double-frame miniature camera is fitted with an f5.6 corrected anastigmat Memar lens focusing from 3½ feet to infinity and with an accurate shutter giving speeds of 1/25, 1/50, 1/100 seconds and Bulb and Time exposures. In addition to its compact design and rugged steel construction, the camera provides the exclusive Memo type of rapid film transport mechanism and is quickly and easily loaded with a standard Agfa Memo cartridge to give 24 double frame size pictures (1 7/16 x 15/16 inches) per cartridge.

Additional features of the new f5.6 Memo include brilliant, optical direct view finder, tripod socket, cable release socket, neckcord eyelets, and automatic exposure counter.

Made by Agfa Ansco in Binghamton, New York, the f5.6 Memo JN124 is available through regular photographic dealers at $14.50 list.



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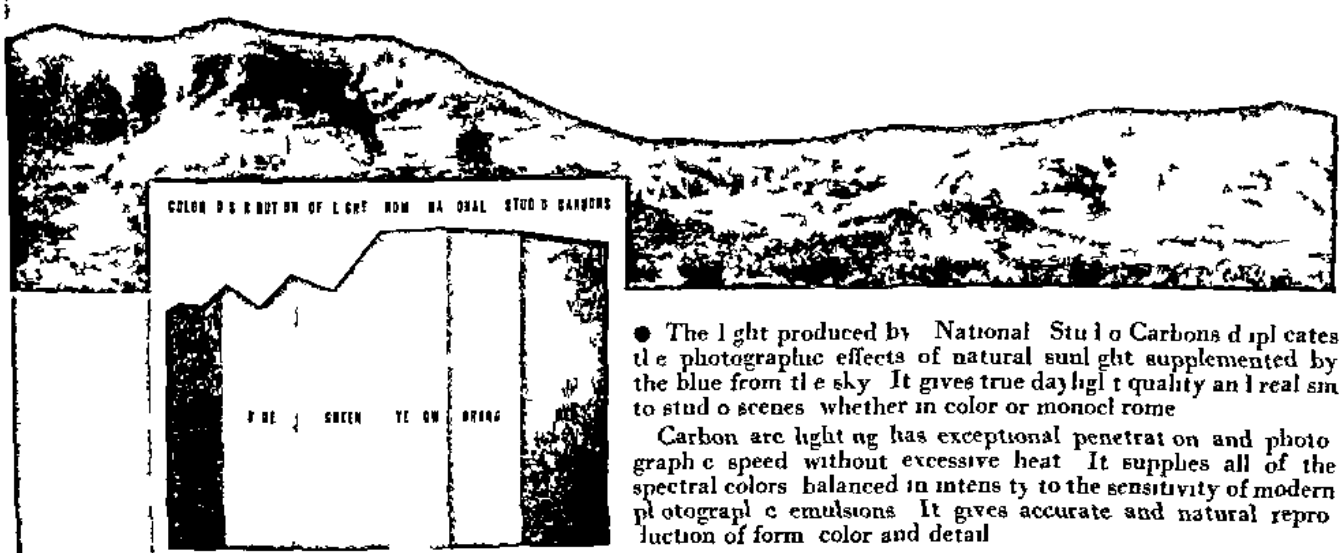
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the early 70's was telecasted last night again and is a remarkable character The members of my staff at W6XAO who so faithfully stay with these telecasts are Dwight Warren Hatto Tappenbach and John Polito operative cameramen Bill Collins and Keva Marcus, assistants All but Marcus, who is a member of Local 644, are members of Local 659, IATSE From Local 728, handling studio set lighting are Tom Fay, Ralph Slater and Eric Wybrow

—*Nelson McEduard*

RKO Production Televised

● For the first time in history a motion picture crew in production has been televised from a sound stage in Hollywood

Thomas S Lee, owner of W6XAO and president of the Don Lee Television System took his twin telecameras—one a telephoto lens the other a wide-angle lens—to stage 2B on the Marathon Street lot of RKO Studios last month to shoot the production of Lum and Abner's new picture, 'Dreaming Out Loud"

More than 2 000 "lookers' in all parts of Southern California watch grips, juicers and cameramen at work They saw long shots, retakes and close-ups made There were even pauses for 'stills" and tele "lookers" were delighted to see how the flash bulb men move in on a set to shoot "muggs" of the actors

Reception on nearly all of Southern California's several hundred teleceivers was reported to be excellent

Patriotic Performance Presented

● Television had a prominent part in the 'I Am An American" national broadcast May 19 A feature of the all star show was the skit entitled 'We Are Americans written by Rupert Hughes and billing Lewis Stone, Hedda Hopper Marjorie Rambeau, Mickey Rooney, Rosemary Lane and Jane Wyman

This portion of the program was televised, simultaneously with the radio broadcast, by Thomas S Lee's W6XAO the only television station in the entire eleven states west of Kansas City

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INTERNATIONAL PHOTOGRAPHER

Vol. XII July, 1940 No. 6

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On the Cover

Langorous South Sea moods are evoked in this atmospheric study by William Wallace, member of Local 659, IATSE, of Olympe Bradna as she appears in the role of a native girl in "South of Pago Pago" Other interesting stills from this Eduard Small production for United Artists release are presented on pages 14 and 15, while a photograph of Wallace at Work appears on page 4

Editor, HERBERT ALLER
Art Editor, JOHN CORYDON HILL, *Business Manager*, HELEN BOYCE
Contributing Editors LEWIS W PHYSIOC, FRED WESTERBERG, D K ALLISON, GEORGE HURRELL, J N A HAWKINS, PAUL R CRAMER, WILLIAM COMYNS, C M HAINES. ROMAN FREULICH ERNEST BACHRACH, ALVIN WYCKOFF, WILLIAM V DRAPER

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INTERNATIONAL PHOTOGRAPHER, as the monthly official publication of International Photographers, Local 659, of the International Alliance of Theatrical Stage Employees and Moving Picture Machine Operators of the United States and Canada not only represents the entire personnel of photographers engaged in professional production of motion pictures in the United States and Canada but also serves technicians in the studios and theatres, who are members of the International Alliance as well as executives and creative artists of the production community and executives and engineers of the manufacturing organizations serving the motion picture industry INTERNATIONAL PHOTOGRAPHER assumes no responsibility for the return of unsolicited manuscripts or material

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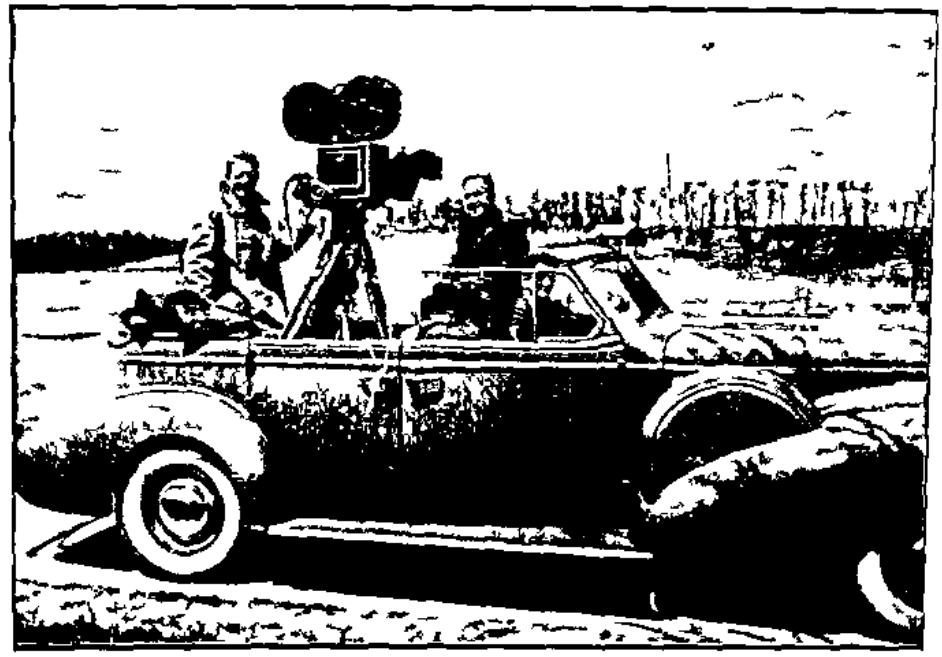
● *Versatility in an actor makes the photographer's job easier when he has to deliver the goods in the form of interesting prints to the studio publicity departments. An amusing example of complete reversal of character is demonstrated in the accompanying shots of "Ace" who plays an important part in the Republic production "The Girl From God's Country." The canine star has been trained to simulate a vicious character as depicted at right or to change instantly to the amiable docile "man's best friend" pose below as he makes a threesome with Jane Wyatt and Chester Morris. "Ace" is a veteran of two and one half years screen experience, takes direction like a human actor and remembers full rehearsal of a scene. He is owned and trained by Earle Johnson and is a son of "Lightning" who also was a screen star. The photos are by Dave Farrel of Local 659 IATSE.*



A HUNTING WE MUST GO

By JIMMIE STONE
Technicolor

★ **Well might that be the theme song of the motion picture industry in its never ending search for authenticity, as typified in this account of a cross country trek to shoot Maryland's big Steeplechase**



On location in Maryland filming the Twentieth Century Fox production Maryland are Art Arling and Bill Leeds with their Technicolor camera They and other members of the camera crew travelled 6600 miles just to shoot the eight and one half minute running of classic Maryland Hunt Cup

It was on the morning of April 27 that the camera crew from Technicolor awakened in their rooms of the Hotel Belvedere Baltimore Maryland and made ready their color equipment for the days shooting They had travelled some thirty three hundred miles to shoot scenes which would last but eight and one quarter minutes They must then pack their belongings and return to Hollywood

Sixty six hundred miles of travel for five men proves the importance of this eight and one quarter minute event to be photographed

Small groups were deep in conversation scattered throughout the lobby of the Belvedere Many were scanning the pages of the morning papers with anxious interest getting last minute information as to weather conditions The hustle and bustle" in the hotel showed an important day was in the offing Indeed there was, for today was to witness the running of the historic Maryland Hunt Cup

This race is the historic Steeplechase of the Bluebloods of Maryland The race was to be the forty-seventh annual running of the Maryland Hunt Cup and the twenty eighth race for the Challenge Cup The run is held under the sanction of the Hunts Committee of the National Steeplechase and Hunt Association

The weight for 4 year olds is 150 pounds 5 year olds 160 pounds 6-year olds and upwards 165 pounds Owners are acceptable to the committee Amateur riders holding certificates from the National Steeplechase and Hunt Association or those eligible for same are permitted to ride

The start and finish of the race are held on the estate of Mr J W Y Martin of Worthington Valley Over this course have run some of Marylands most famous horses and riders The total length of the run is but four miles

The morning of the race found the day clear with high broken scattered clouds The green grass and foliage was in evidence for this was springtime in Maryland

After a hastay breakfast the crew was off to the location Fifteen miles out of Baltimore they arrived at the scene of the Steeplechase The Martin estate is nestled in a small valley of rich green grass Standing on one of the knolls that rimmed the valley one could see a panorama of the curse to be run

The clouds were now becoming large cumulus tufts backed by a vivid blue sky background Colored pennants lined the course to be run The paddock was fenced off to take care of the anticipated crowds

The camera crew unloaded their equipment and made ready to take the positions to be assigned them The scenes they had traveled so far to record were to be one of the highlights in Twentieth Century Fox feature production Maryland directed by Henry King With him was director of photography Ray Rennahan who selected the camera angles Cameras and technicians were assigned their posts There was to be no excuse for error as the events of the day could not be rehearsed or repeated In all seven color cameras were used so that many camera angles could be taken of this event

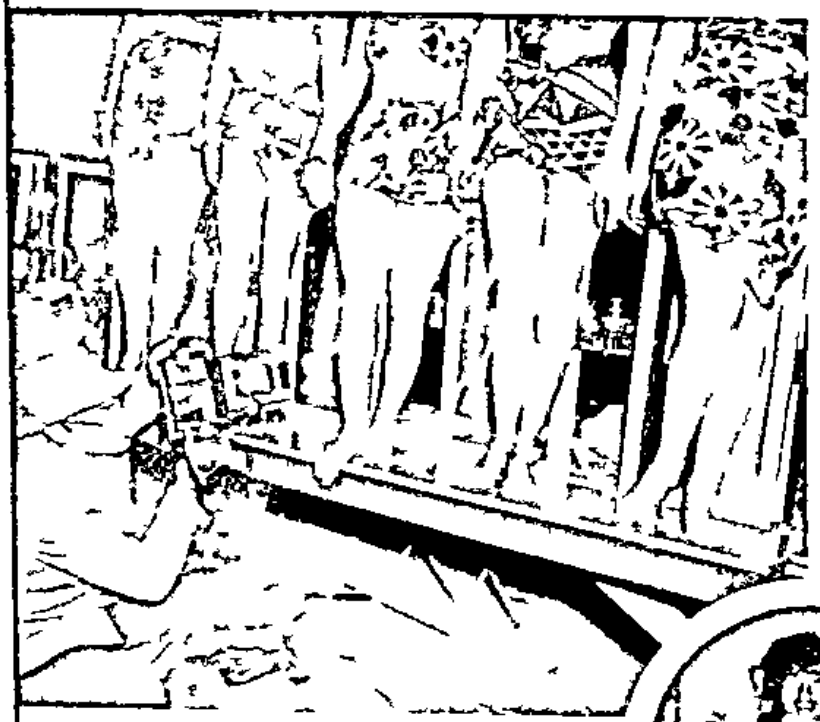
Cameras were assigned to the important jumps A camera was made fast in the back seat of an automobile for running shots Still other cameras were to shoot action of crowds, weighing in and the start and finish of the race

The race was to start promptly at four p m By three thirty there were over thirty thousand people present Airplanes landed on nearby hillsides People arrived on horseback cars taxis and even bicycles By three forty five the riders were walking their horses around the paddock Our big beautiful clouds obscured the sunlight A cold wind was blowing Technicians double checked their cameras Cameramen checked their free heads to become familiar with their characteristics It was three minutes to four when the horses took their positions for the start of the race

At four sharp when the traditional start had always been held a car became bogged down in the line of the run There was a delay of nearly seven minutes. Ray Renna

(Continued on Page 6)

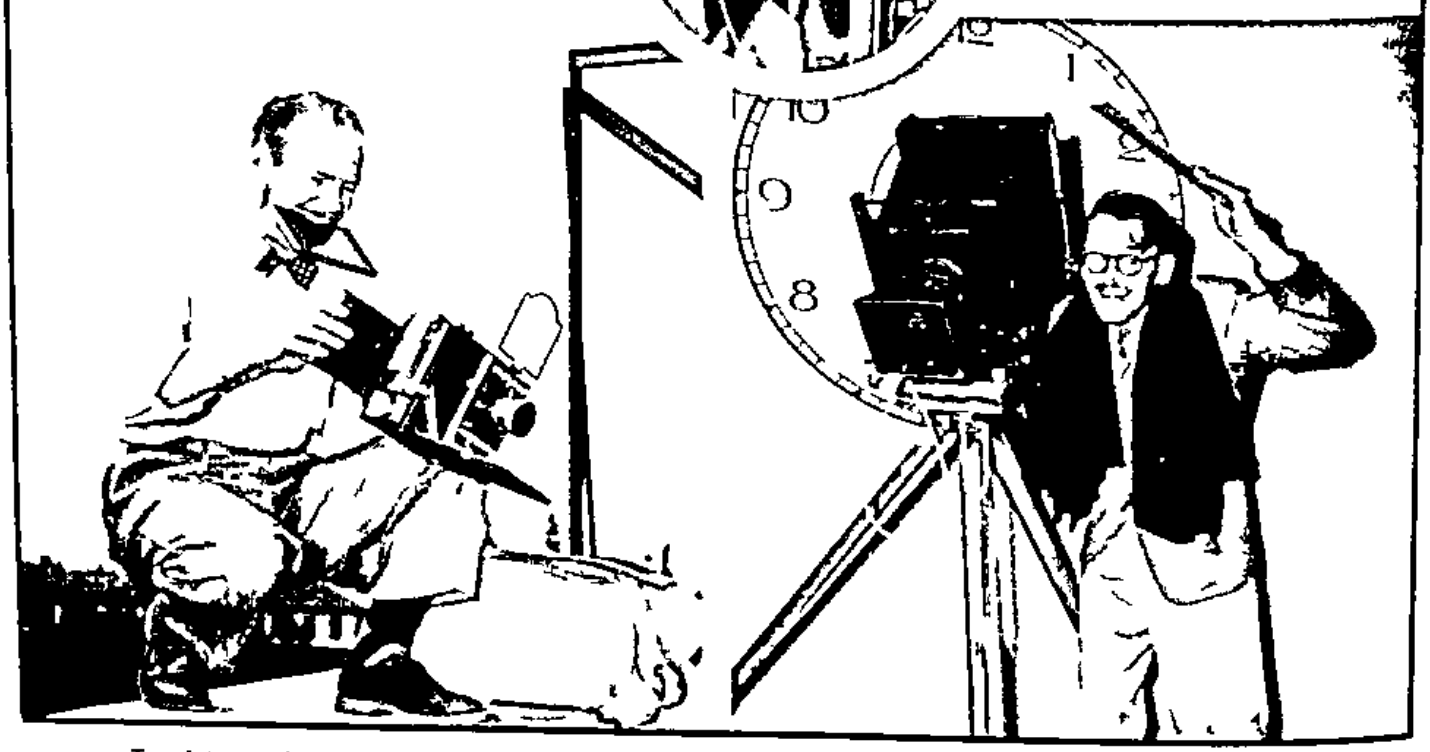
QUIET' 'STILLMEN AT WORK







Hov do they do it?" is the question many ask us they observe the consistently h gh qua ty output of photoe aph from studio st llmen. One ans cer s shoun on these pages as the techniques of some of the sharpshooters are re-vealed by a co-worker Charles Rhodes



Top, left to r ght) Today s cameramen never ov erlook a g ood angle shot (or curves for that matter) as is illustrated by B ll Wallace Elmer Fryer amuses his port ait sul jects by k k ng up his heels as he squeeres the bulb (Inset) Scotty Wellbourne resorts to beards and wigs and other props to get a laugh from his subject (Bottom left to r ght) Schuyler Cra l ha both hands and h s mouth full Bert Longs orth is famed for his "Th rty Dollars" expression when things cl ck The clock face without hands is also h s orig nal on









(Top left to r ght) Mad son Lacey p o ~ that a st l an l as to be l usky a ell as e sat le a he lugs h 8x10 h s Graph c and h s Le ca to the set M cke Mart gol l also us a t o can era na ts ng h s Le ca and Gr pl c for candids dur ng rel ea snl on tl e "L fe of Knut Rockne set (Botton left to r ght) Ma lul an goes for l gh angle shots He l as a t pod extens on that gets h s ca a t el e feet nto the air Mack Ell ott s one of the many ho g ve t ps to an ateur came a enthus asts in tl s case Ol i a D Hav lan l on the Ep sode set a Warner s (All pho og apl s on tl ese page are used by cou tesy of Fa cett Publ cat ons)

"MARYLAND"

(Continued from Page 3)

han could not be located but as our disturbing cloud began to clear the sun the car was removed from the track No doubt Ray Rennahan might explain the welcomed delay of the race Then like a huge asbestos curtain rising from the proscenium of a great theatre the annoying clouds floated past the sun placing our horses and riders in the spotlight of our great ampitheatre

"THEY'RE OFF!" The field consisted of fifteen horses The first and second jumps were made without incident. The third jump was ahead That was my camera position The camera is rolling and cameraman Jack Painter is now a part of the Technicolor camera Horse No 15 clears the jump nicely, now No 12 then as horse No 14 attempts the hurdle his rider has pressed the horse too close to the jump The horse's left foreleg hits the top rail 5 feet 6 inches) The horse spins through the air and falls in a heap close to the rider The rest of the field make the jump missing the fallen rider by inches After a hasty examination of the horse's injuries the rider and horse No 14 are again off to finish the race as though nothing had happened Our camera was lined up on jumps No 3 and 13 Quick lens changes were necessary by the technicians and panorama shots by the camera men Everything went like clock work In exactly eight and one-quarter minutes it was all over

The camera men had done their work well Technicians checked their cameras to be sure everything mechanically was in order Each camera crew reported to Ray Rennahan their results and then prepared their cameras for the long trip back to Hollywood

Local 659 IATSE, was well represented Besides director of photography Ray Rennahan there were Cameramen Art Arling Irving Rosenburg and Sidney Zipser

Technicolor technicians consisted of John "Bill" Leeds Ralph Adams, John Hamilton "Duke" Callahan and Jimmie Stone

From the New York City Local 644 IATSE, there were Cameramen Jack Painter George Hinners, William Steiner and Harold Muller who is president of the local

There was but one Technicolor technician from New York City He was Fred Detmers, who has been stationed there for the past two years All of the assistant cameramen were from Local 644 and were composed of the following Ray Smith William Anzer and Barney Haugh

I wish to pay tribute to the men of Local 644 who worked so cooperatively with the gang from Local 659 I have never had the pleasure of working under more desirable or fraternal conditions.



Charles Rhodes, who is responsible for the feature layout on the two preceding pages, learned photography from his brother-in law R M Stagg who at that time operated the largest commercial studio in Los Angeles While with Stagg he became a familiar figure in Hollywood as he handled all of Stagg's Hollywood accounts which included the top publicity agents and their stars, also all the special work on *Photoplay* magazine which brought him in contact with all the major studios on these special assignments

After six years with Stagg where he had the experience of operating all types of cameras, he decided he wanted the experience of working for a newsreel and so joined the staff of Wide World Photos where he spent a year While with Wide World he was put back on the Hollywood beat where he came in contact with W H Fawcett president of the Fawcett Publications, who promptly employed him as staff photographer for all the Fawcett fan magazines which include "*Motion Picture*, "*Hollywood*" *Screen Life* and "*Movie Story*" He has been in the employ of this company for the past five and one-half years where he is a pretty busy individual dreaming up and executing picture layouts of the stars informal portraits home layouts gag layouts, fashions, natural color for covers (he uses Kodachrome) openings, premieres night clubs, parties and polo games, advertising pictures and anything that comes under the heading of photography

Before taking up photography he was a salesman and with his commercial photography experience he is an adept photo illustrator His pictures tell a story He is a native of Oregon transplanted to Hollywood by way of Oakland

Improving On Nature

● On location at Bishop California for 20th Century Fox' Technicolor production of "The Return of Frank James" the entire cast and crew of the film dress in outdoor clothing Henry Fonda Jackie Cooper, Charlie Tannen and the others in the cast wear high boots and pack pistols while members of the crew wear dungarees or boots and breeches

But not Bill Fredson He is the sole exception The reason is that Bill is the company painter and painters simply have to wear white on the job Although there are no sets to paint, without Bill the company could not work

For all day long Bill runs about the location in answer to distress calls from Chief Cameraman George Barnes and William Skall member Local 659 IATSE.

On his back Bill packs a gadget that looks like a fire extinguisher Actually it is the pressure tank of a spray gun loaded with dull black lacquer Whenever the cameramen look in the finder and discover that brilliant reflections from a white rock are ruining their shot they shout for Bill And Bill in less time than it takes to tell promptly sprays the offending object with a light wash of paint killing the shine but for the Technicolor cameras not changing the apparent white

THEORY OF THREE-COLOR PHOTOGRAPHY

By KEVA MARCUS

PART II

★ **In which it is explained why, in the subtractive process, the printing color for the blue-record negative is yellow, the printing color for the green record negative is magenta, and the printing color for red record negative is cyan**

Part I of The Theory of Three-Color Photography was published in the March issue of INTERNATIONAL PHOTOGRAPHER and its forerunner — Primary and Complementary Colors —appeared in the January issue These three articles comprehensively cover the fundamental principles involved in color photography and are recommended as a basis of study for those who are working or intend to work in the color field Systems of Three-Color Photography" and other related articles by the same author will appear in sequence form at intervals in future editions of INTERNATIONAL PHOTOGRAPHER One of the distinguishing features of Mr Marcus presentations of the basic facts regarding color photography is that he translates the subject into terms easily comprehensible by photographers whose experience is limited to black-and white work.—Editor's Note

UNDOUBTEDLY one of the most puzzling points to comprehend in three-color photography is why, in the subtractive method of reproduction the negative photographing *blue* light should have its positive image turn out to be *yellow* the negative photographing *green* light should have its positive image turn out to be *magenta* and the negative photographing *red* light should have its positive image turn out to be *cyan*

In order to discover the reasons behind such a seemingly illogical procedure let us begin with an examination of what takes place in black and white photography

When a projector lamp is turned on without any film in the gate the screen becomes evenly illuminated with white light As soon as a black and white transparency (such as motion picture film) is inserted the screen no longer is *evenly* illuminated with white light but is *unevenly* illuminated Some parts of the screen are dark some parts of the screen are light These variations in light and shade make up our black and white picture

What causes these variations in light and shade? The answer is variations in deposits of black silver on the positive transparency Black silver has the property of absorbing light Where a deposit of silver is heavy a lot of light will be absorbed Where a deposit of silver is not heavy very little light will be absorbed

So we see that the amount of light reaching the screen varies with the amount of silver on the transparency In other words *the varying deposits of silver on the black and white transparency* CONTROL *the amount of light reaching the screen*

We also know that the amount of silver on the positive varies INVERSELY with the amount of light reflected from the object photographed Where the object reflected a *lot* of light there will be *little* silver on the positive Where the object reflected very *little* light there will be very *much* silver on the positive This of course is the direct opposite of the condition existing in the negative where we find that at those places where the photographed object is dark the negative will be light (due to few particles of silver developing) At those places where the photographed object is light the negative will be dark (due to a large number of silver particles developing)

These facts are fundamental and well known in black and white photography but they must be clearly born in mind throughout this discussion because the same basic principles apply also in color photography

In projecting a black and white photograph only one kind of light need be controlled—that whichever happens to be coming from the projector It might be pink lavender or white Our transparency would still give us a picture because in black and white photography images are produced by differences in light and shade only And the black and white transparency would serve as well to vary the light and shade of one color as for another color because the black silver (of which the images on the film are composed) absorbs *all* colors indiscriminately

Unlike black and white photography wherein only one "kind of light need be controlled in three color photography THREE kinds of light must be controlled Blue Green and Red because these are the Sensation Primary Colors which as rays of light striking the eye can produce all other sensations of color And of course each of these sensation or light primaries must be controlled independently of each other

One way of controlling these three colors individually is to use three separate light sources—such as three magic lanterns—one emitting blue light one emitting green light and one emitting red light If three black and white positives are made from three separation negatives and properly placed in the three magic lanterns the light coming from the red lantern would be controlled by varying deposits of silver the light coming from the green lantern would be controlled by varying deposits of silver and the light coming from the blue lantern would be controlled by varying deposits of silver When the images coming from the three lanterns are superimposed upon a screen a natural color photograph results This is known as the ADDITIVE method of color synthesis

However blue green and red rays are obtainable from a *single* light source i.e white light because white light contains blue green and red rays It is as if the three colored lanterns were housed in one compartment with their combined rays emerging from a single point source

The question that naturally arises therefore is how can we utilize the blue green and red rays coming from the single light source? *How can we manage to control the transmission of one of these primary colors* WITHOUT *that controlling factor* INTERFERING *with the transmission of the* OTHER *two primaries* This problem is raised because in order to control the blue green and red rays coming from the single (white) light source the three transparencies which we are to use must obviously be placed *one directly in front of the other* Black silver would not serve as the controlling factor because silver absorbs all colors indiscriminately Therefore the transparency whose duty it was to control *only* the red rays would also affect the blue and green rays

What we need then is a special kind of silver One that is *selective* One that can *distinguish* between one color and another One that will say I want you—but I don't want you" In fact we need *three* special kinds of silver one that will pick out the BLUE rays to control but will leave the green and red ones alone one that will pick out the GREEN rays to control but will leave the blue and red ones alone and one that will pick out the RED rays to control but will leave the blue and green ones alone If these three special kinds of silver" could be found then we could use the first one on our positive made from the blue record negative the second one on our positive made from the green record negative and the third one on our positive made from the red record negative

So far we have been unable to find any "special kinds of silver" which would perform in the manner just described However if any *other* substances could be found which would

do exactly what we would want our special kinds of silver to do we might use *them* in place of the so-called special silvers And such substances *are* available They are dyes inks etc These substances *do* have the ability to discriminate between different kinds of colors of light They *do* have the property of being able to *absorb* one color while *not* absorbing another color For instance A cyan color dye selects' red light to be absorbed but "refl cts blue and green light A magenta color dye pounces upon green rays and absorbs them but permits the red and blue rays to pass on unmolested A yellow color dye "picks out the blue rays for control but exerts no influence upon the green and red rays

Therefore if on the transparency whose job it is to control only the red rays coming from white light, we use varying deposits of cyan dye in place of varying deposits of black silver our objective will be accomplished We will be able to *control* the transmission of only red light because where the deposit of cyan dye is *thick* a *lot* of red light will be *absorbed* (and consequently from this point very little red light will reach the screen) Where the deposit of cyan dye is *thin* very *little* red light will be absorbed (and consequently, from this point a *lot* of red light will reach the screen) But *regardless* of how thick or thin the deposit of cyan dye is *all the blue and all the green light coming from the white light source will be fully transmitted to the screen because blue and green rays are not absorbed by cyan dye*[1]

If on the transparency whose job it is to control only the green rays coming from white light we use varying deposits of magenta dye in place of varying deposits of black silver our objective here will also be accomplished We will be able to *control* the transmission of only green light because where the deposit of magenta dye is *thick* a *lot* of green light will be *absorbed* (and consequently from this point very little green light will reach the screen) Where the deposit of magenta dye is *thin* very *little* green light will be absorbed (and consequently from this point very much green light will reach the screen)

But no matter how thick or thin the deposit of magenta dye is *all the blue and all the red light coming from the white light source will be fully transmitted to the screen because blue and red rays are not absorbed by magenta dye*[1]

Similarly if on the transparency whose job it is to control the blue rays coming from white light, we use varying deposits of yellow dye instead of varying deposits of black silver our objective will be accomplished in this case also We will be able to control the transmission of only blue light because where the deposit of yellow dye is *thick* a *lot* of blue light will be *absorbed* (and consequently from this point very little blue light will reach the screen) Where the deposit of yellow dye is *thin* very *little* blue light will be absorbed (and consequently, from this point, a lot of blue light will reach the screen) But *regardless* of how thick or thin the deposit of yellow dye is *all the green and all the red light coming from the white light source will be fully transmitted to the screen because green and red light are not absorbed by yellow dye*[1]

This is illustrated in figure 2 where we see that the variations in the thicknesses of the dyes on our Subtractive transparencies compare *exactly* with the variations in the thicknesses of black silver on the Additive transparencies In both cases these variations in thickness—which vary the amount of blue, green and red light coming from the projectors—make up our color picture

Both the above cases compare with the variations in thickness of silver which comprise a picture on a black and white transparency In the latter case our black-and white picture results from variations in light and shade In the former case our multi-color picture (consisting possibly of purple ivory and copper colored objects) results from variations in blue, green and red light reaching the screen

[1] This, like many similar statements made throughout this discussion, is only theoretically true Actually all dyes, inks and pigments absorb some of the light they are supposed to transmit (or reflect) and transmit (or reflect) some of the light they are supposed to absorb.

Since we see that Cyan is the color which will control the transmission of only red light and Magenta the color which will control the transmission of only green light and Yellow the color which will control the transmission of only blue light, it follows that the transparency made from the *red record negative* (and which must therefore control the red rays coming from white light) should contain the 'red light controlling substance"—which is Cyan Dye and the transparency made from the *green record negative* (and which therefore must control the green rays coming from white light) should contain the "green light controlling substance —which is Magenta Dye and the transparency made from the *blue record negative* (and which therefore must control the blue rays coming from white light) should contain the blue light controlling substance —which is Yellow Dye

In black and white photography the clear spaces on a positive transparency are indicative of a lot of light reaching the negative while the dark spaces are indicative of very little light reaching the negative That is *the particles of silver on a black and white positive transparency represent the amount of light which was NOT photographed* (the opposite of what is true in a negative) This point will become clearer if we consider what takes place when we photograph an object half of which is white and the other half black In the positive, that part of the transparency which is to reproduce the white portion of our object will contain very little silver while that part which is to reproduce the black portion of our object will be chock full of silver In other words the amount of silver in a black and white transparency is in direct proportion to the amount of light which is to be PREVENTED from reaching the screen In terms of image density a positive image is *dense* in proportion to the amount of light which is to be *prevented* from reaching the screen

In color photography the dye on each transparency is the *exact counterpart* of the silver on a black and white transparency *The dye on each color transparency represents the amount of light which was NOT photographed* Therefore these dyes are present on the transparencies in *proportion* to the amount of light which is to be PREVENTED from reaching the screen

Since the positive image made from the blue-record negative must control the transmission of blue light it will be a yellow image because yellow absorbs blue rays—*and it will be* DENSE *in proportion to the amount of blue light which it is to prevent from reaching the screen* Where no blue light was photographed (and consequently where no blue light must reach the screen) a heavy deposit of yellow dye will be found on the transparency Where a lot of blue light was photographed (and consequently where a lot of blue light must reach the screen) very little yellow dye will be found on the transparency

Similarly the presence of a lot of dye on a magenta transparency indicates that at this point in the original subject photographed very little green light was reflected And by the same reasoning if a part of a cyan transparency is absolutely clear the indication is that at this point the object photographed was probably an intense red light

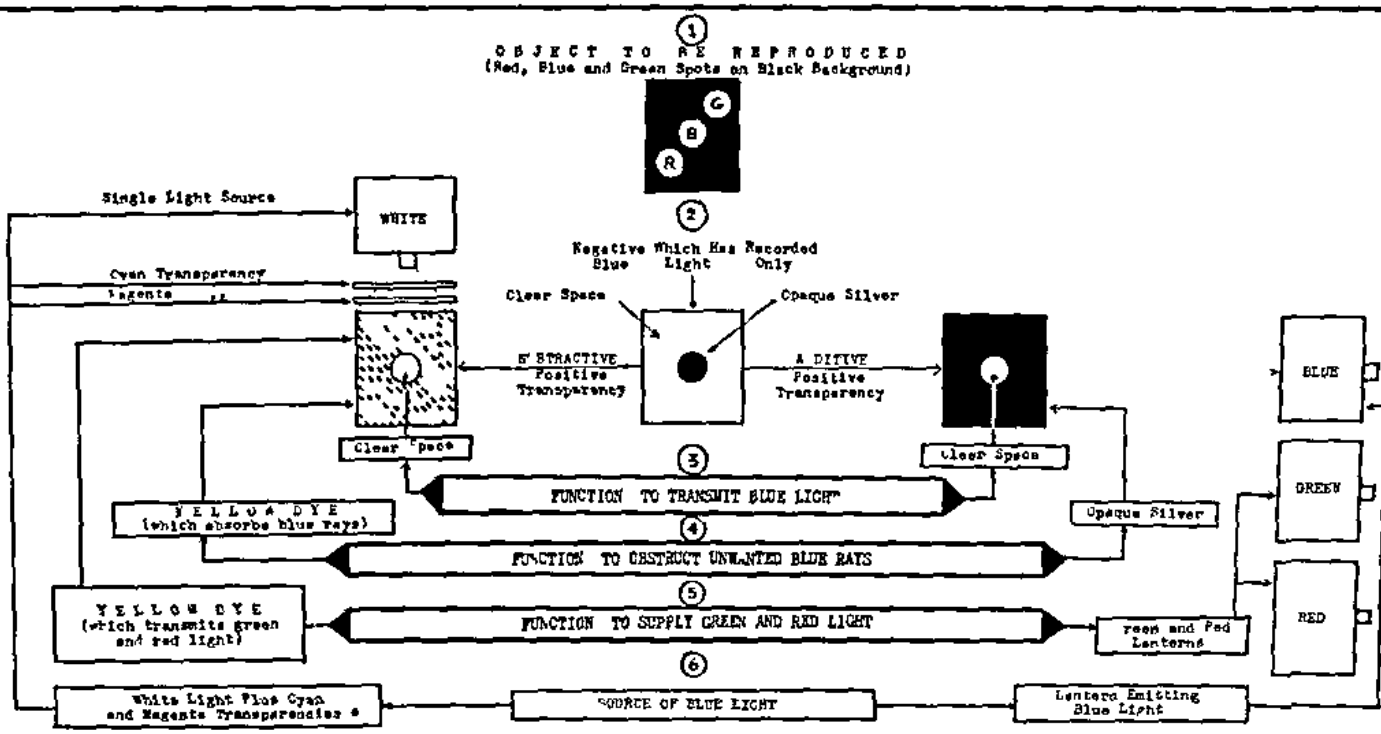
A step by step comparison between the Subtractive and Additive methods of reproduction will aid in visualizing this point

In figure 1 we find that the blue green and red spots on the object photographed are all represented by *clear spots* in both the subtractive and additive transparencies made from the three separation negatives Examining the two transparencies made from the blue-record negative we find a clear space in the center of both The function of this clear space is to permit the desired blue rays to be transmitted to the screen At this point in our comparison therefore, the two transparencies are absolutely identical

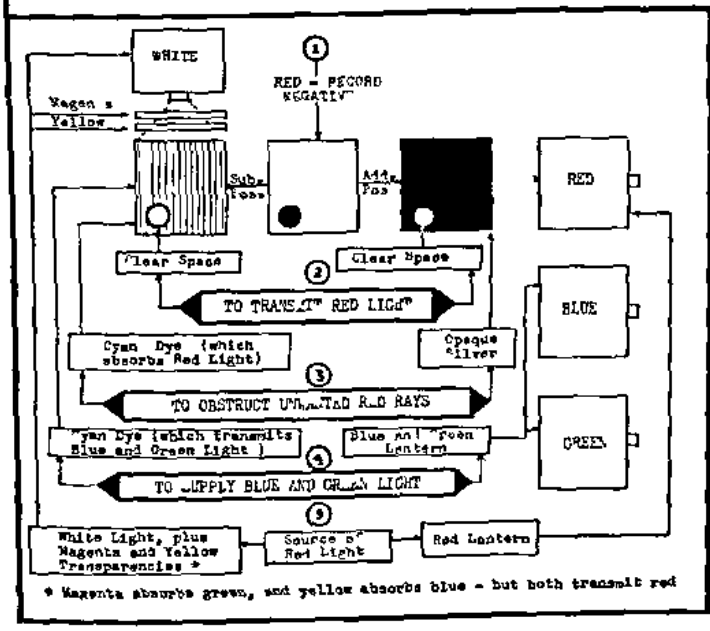
Continuing with our examination we find that the function of the area surrounding this clear space in both cases is to prevent unwanted blue rays from reaching the screen However while the *function* to be performed by the two transparencies is

STEP-BY-STEP COMPARISON OF SUBTRACTIVE AND ADDITIVE SYNTHESIS

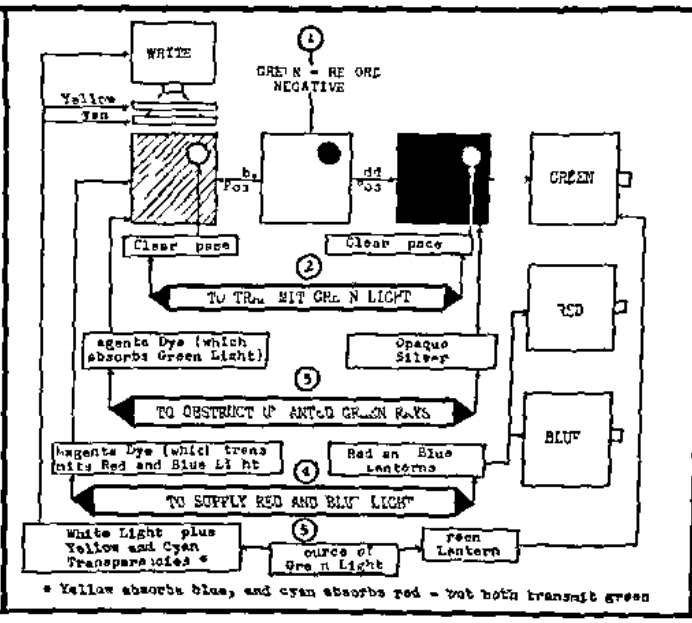
BOTH METHODS MUST SUPPLY BLUE GREEN AND RED LIGHT BECAUSE THESE ARE THE SENSATION PRIMARY COLORS FROM WHICH ALL OTHER COLOR SENSATIONS CAN BE PRODUCED BOTH METHODS MUST TRANSMIT THE DESIRED RAYS WHILE AT THE SAME TIME WITHHOLDING THE UNWANTED ONES THE DIAGRAM ILLUSTRATES HOW EACH OF THESE FUNCTIONS IS PERFORMED DIFFERENTLY BY THE TWO METHODS



* White light contains red green and blue rays Cyan absorbs the red rays and magenta absorbs the green rays but both transmit the blue rays - thus white light is transformed into blue light (In actual practice the three subtractive transparencies are in physical contact instead of being separated by air spaces as indicated in the diagram)



* Magenta absorbs green, and yellow absorbs blue - but both transmit red



* Yellow absorbs blue, and cyan absorbs red - but both transmit green

FIG 1 ORIGINAL DRAWING BY KEVA MARCUS

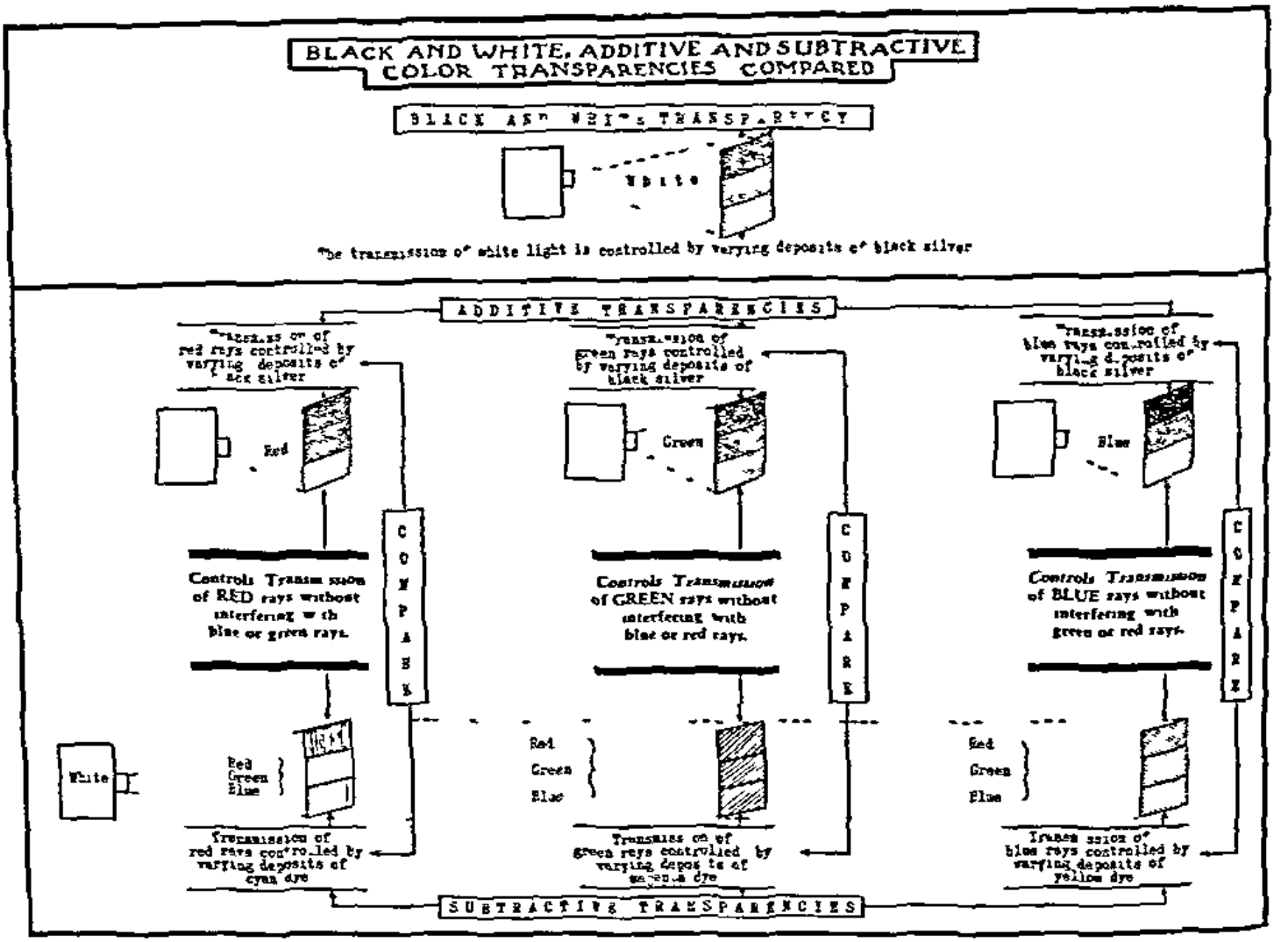


FIG 2 ORIGINAL DRAWING BY KEYA MARCUS

● *In projecting a black-and white photograph only one "kind" of light need be controlled i e., white light In a black-and white transparency the transmission of white light is controlled by varying deposits of black silver which absorbs all kinds of light without discrimination. In three-color photography* THREE *"kinds" of light must be controlled Blue Green and Red (the Light Primaries) Therefore whatever controls the transmission of one primary color must not interfere with the transmission of another primary color In an* ADDITIVE *transparency the transmission of light of one color can be controlled by varying deposits of silver (just as in a black-and white transparency) without interfering with the transmission of light of another color because in the* ADDITIVE *method of reproduction Blue Green and Red light come from three separate sources In the* SUBTRACTIVE *method of reproduction where Blue Green and Red light come from the same light source i e., white light the control of the transmission of light of one color without interfering with the transmission of light of another color can be accomplished by the use of dyes because an appropriately colored dye will absorb one primary color without absorbing another primary color Thus the transmission of red light is controlled by varying deposits of Cyan Dye because this color absorbs red but freely transmits blue and green The transmission of green light is controlled by varying deposits of Magenta Dye because magenta absorbs green but freely transmits red and blue The transmission of blue light is controlled by varying deposits of Yellow Dye because yellow absorbs blue but freely transmits green and red Hence in the subtractive process the positive made from the Red Record negative contains a Cyan image the positive made from the Green Record negative contains a Magenta image and the positive made from the Blue-Record negative contains a Yellow image*

absolutely the same the *manner* in which it is performed by the two is quite different In the additive transparency this function is performed by black silver in the subtractive transparency it is performed by yellow dye

If the blue rays *coming from* the object photographed are represented by just *clear space* in the both positive transparencies the question that naturally arises is *where* does the blue light *itself* come from which is to illuminate the screen?

In the Additive system the answer is that the blue light comes from the blue magic lantern the rays from the green and red lanterns being blocked off by opaque areas in the "green" and "red" transparencies.

In the Subtractive system the source of the Blue Light is the white light source—the green and red rays being blocked off by the subtractive transparencies which have become opaque to green and red light in the proper areas This is what happens

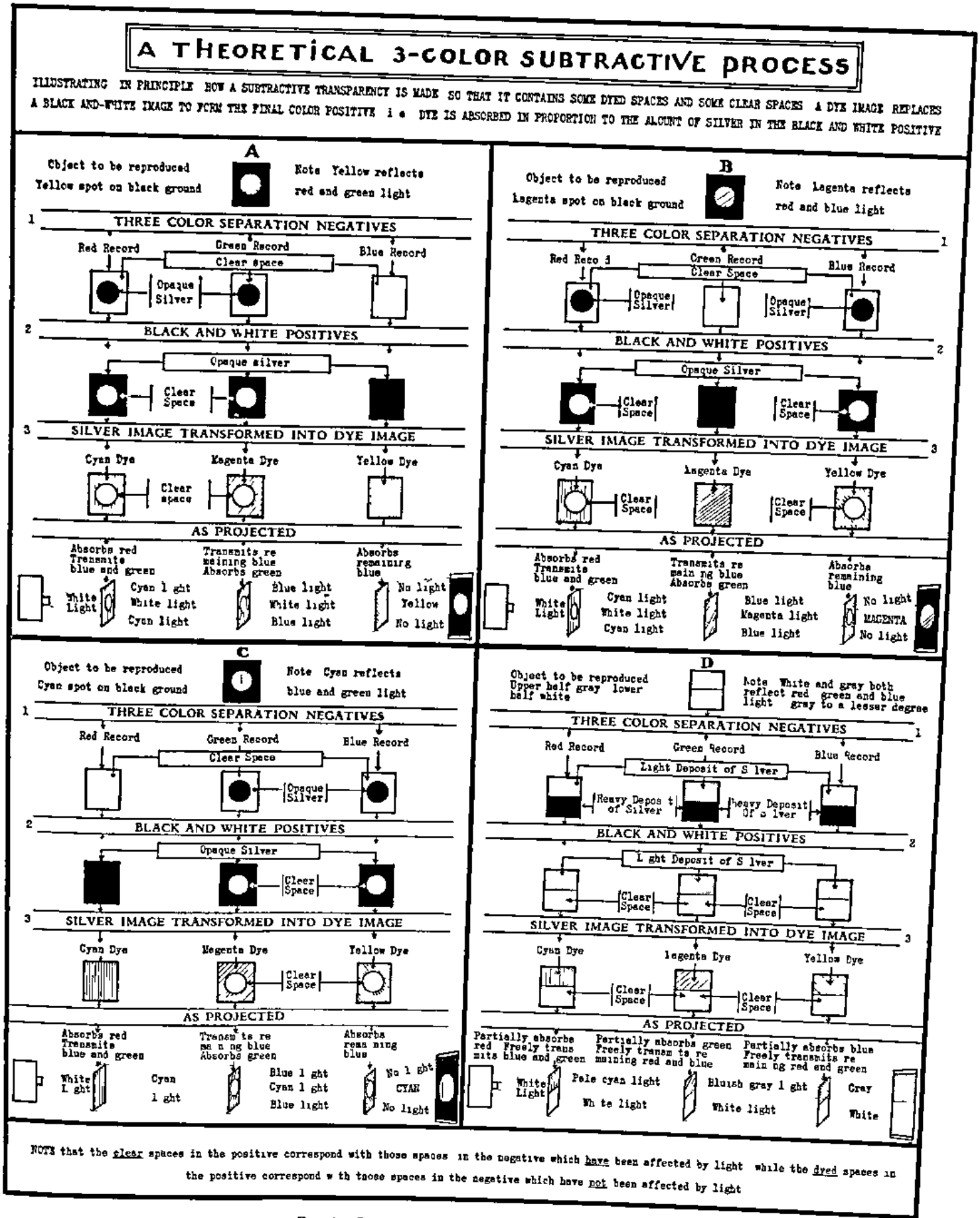


FIG 3 ORIGINAL DRAWING BY KEVA MARCUS

A terse description by Adrian Klein summarizes the subtractive process

Referring to one of the most original thinkers to approach the subject of color photography Klein in his '*Colour Cinematography* says

> Again Ducos Du Huron was the first to clearly define the relation between the three colour separation negatives and the production from them of a subtractive print or colour transparency The gradations of a black and white positive print made from a colour separation negative represent the light which was *not* recorded on the negative Used as a transparency placed in front of a source of light it can be made to function as an absorber of the particular primary colour recorded on the negative from which it was made To this end the positive print must be rendered in such a colour as will be transparent to the remainder of the spectrum unrecorded on the negative, and opaque to the colour which was recorded So that from the three negatives three positives are made, each in the colour complementary[7] (namely, the balance of the spectrum) to the light recorded on the negative used When assembled in superposition we have in fact made an infinitely variable three colour subtractive filter which can be placed between the eye and a source of white light Thus the red filter negative has to be printed in green blue (tourquoise)[8] the green filter negative in red blue (magenta) and the blue filter negative in red green (yellow)

[6] The sudden introduction of "yellow light into a discussion which has considered yellow as the product of green and red light may be confusing *The "yellow" referred to is the yellow light* contained in the spectrum of white light and is to be distinguished from the *sensation* of yellow caused by certain pigments, dyes, inks etc reflecting certain wavelengths of light The sensation of yellow can be stimulated by (1) the "spectrum yellow light alone (2) an additive mixture of green and red light or (3) a combination of all three

It is possible to have a substance which would *absorb* the true yellow light from the spectrum but which would still appear yellow to the eye because it reflected green and red light (see Colour in Theory and Practice" Vol I by H D Murray and D A Spencer Chapman & Hall Ltd London 1939 fig 90 p 103) An ink, therefore which would reflect "the whole of the red yellow and green light" (of the spectrum) would be one which did not absorb the red or the yellow or the green rays falling upon it when illuminated by a white light source

Since the brightness of yellow objects in general is due more to their reflection of green and red light than to their reflection of pure yellow light the practice of considering the sensation of yellow as the result of only green and red light is justified for the sake of simplicity

[7] The word "complementary means "completing *and the thing to* be completed is the spectrum of white light

If we divide the spectrum of white light into three parts Blue Green and Red and we remove any part of it then the part which we remove is called complementary" to those parts which remain because *all* parts are necessary for the spectrum to be complete For instance if we remove green green is the color which must be returned to complete the spectrum of white light When green is removed the colors that remain in the spectrum are blue and red Blue and red together make up the color we call Magenta Therefore green and magenta are called Complementary Colors Similarly Red and Cyan (cyan is blue plus green) are called Complementary and Blue and Yellow (yellow is green plus red) are Complementary It will therefore be recognized that each of the printing colors is Complementary to its negative recording color

[8] Klein uses the color name "Tourquoise to describe the same color which is also called "Cyan

Appointments Announced

● A step of far reaching significance was recently taken by the Bell & Howell Company in the establishment of an Electronics Division at the company's engineering laboratory With Louis A McNabb as director the new division will be devoted exclusively to design and engineering problems associated with sound phenomena and will have complete jurisdiction over all B & H research, development and manufacturing in the field of sound equipment and television The Electronics Division will also authorize standards for construction and inspection of electronic equipment and will provide the inspection instruments necessary for the maintenance of these rigid standards

In a quiet out of the-way corner of Chicago s northwest side more than a mile removed from the factory the B & H engineering laboratory attracts little attention from passers by Probably not even the dwellers and workers of the neighborhood are aware that here is what is said to be the world s largest motion picture research laboratory that within those walls is gathered a staff of engineers and technicians unequalled the world over The establishment within this laboratory of a division devoted solely to electronics thus brings a distinguished addition to the specialists in this field and Bell & Howell developments especialy those having to do with amplification of sound on film will be eagerly awaited in the future

Louis A McNabb who heads the new division received his early education in Canada and took his engineering degree at the University of Detroit. He has been associated with the engineering and manufacturing of motion picture machinery for the past eleven years and during this time has made many valuable contributions towards the advancement of the art

Assuming his new duties with a wealth of first hand experience in the visual education field Wallace A Moen has been appointed assistant manager of the B & H Educational Division Mr Moen received his B A from Luther College, Decorah Iowa, and for the five ensuing years taught the social sciences in the public high schools of that state After two years of administrative work and direct connection with visual aids in education Mr Moen joined the staff of the Bell & Howell Co



Members of the camera crew that photographed South of Pago Pago are shown perched high above the decks in the shadow of the sails and mast of the sailing vessel used in photographing part of the colorful South Seas picture stills from which appear on the following two pages and on the cover Left to right are seen Robert Pittack first cameraman Harry Merland second and Harlowe Stengel assistant all members of Local 659 IATSE They worked with the second unit on location scenes taken off Long Beach and Balboa

south of pago-pago







"South of Pago-Pago" is another of those South Sea productions that provide a wealth of photogenic material for motion picture and still cameramen alike. Samples of the still taken by William Wallace, member of Local 659 IATSE, are shown in this layout and on the cover. The story revolves about the emotional conflict between the native girl Malia, played by Olympe Bradna (extreme left) and her Occidental sister por

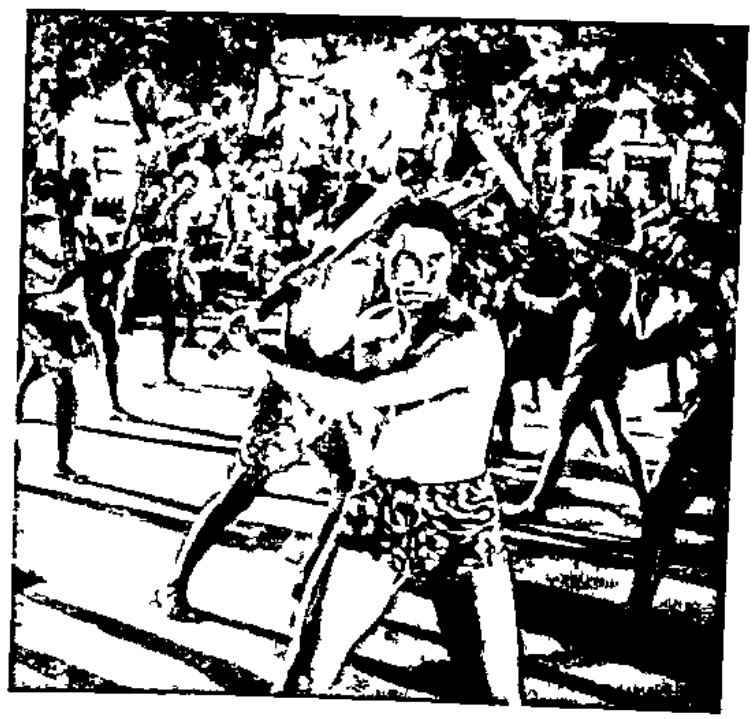


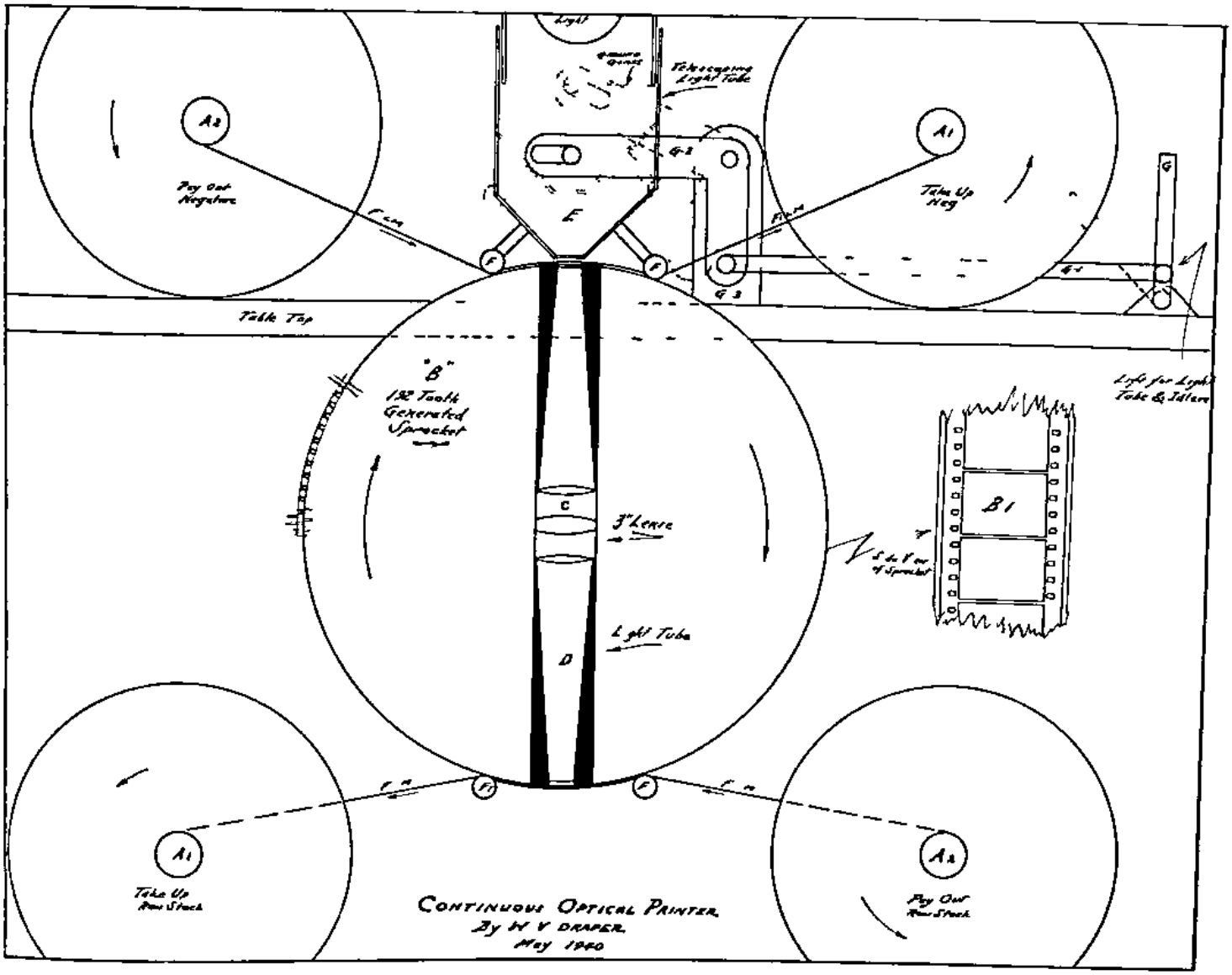




Farmer who s shown and (top panel) n the Victor McLaglen n a nk where the p cture or a fabulous pearl bed crew and Ruby (M ss land of Manoa where or to rece e a tumultous nat es A dance by theart Jon Hall s part of the enterta nment pro ded for the wh te tors at the land fea t given n the r honor (Lower panel) Wh le the nat es d e for pearl an attachment is de elop ng between R h and the son of the Island ch ef Tl ev lea e for the nearby vol an c sland of Mo u A ua to pledge the r mar r age ows at the altar of Pele Wh le they are gone w ld d order breaks out and Bu ko Larson (McLaglen) k ls many of the na t es nclud ng the ch ef To a en e h s father s death, Kehane (Hall) leads the warr ors n a kn fe dance preparatory to ra d ng the boat of the n aders W thout g n_ you all the exc ng deta ls need we say that the scena o wr ters prove aga n that east is ea t and west s west and never the twain shall meet? The p ctu e s an Edward Small produc on for Un ted Art ts release







out further attention regardless of the number of scenes to be printed and without turning off the white light

Above the table top would be the flanges for the negative A1 and A2 together with the light system It will be noted in the drawing that idlers F and F are mounted to the telescoping light tube This is to permit their being raised along with light tube (E) by lever system (G) It would probably be more convenient to work this lever system with a foot pedal as that would leave both hands free for placing the negative on the sprocket It would also be desirable to have the extreme position of lever (G) form a contact that would start the printer

It is not absolutely necessary to employ a 12 inch sprocket in building this printer as any suitable means of pulling the two films past the lens at precisely the same speed would do but the big sprocket seems an ideal method as it not only would provide a perfect means for matching the film speeds but a generated sprocket would conceivably make it a very accurate printer

There is very little left to say Writing as I am for a group of readers whose knowledge of optics will tell them at a glance that the negative traveling from left to right past the light source is turned over by the lens system so that the travel of the image on the opposite side of the sprocket is from right to left where if the film speed is equal to the travel of the image the area being exposed in relation to the image itself is standing still

It probably is not possible to anticipate all of the problems that might arise in the building of such a machine I would certainly not expect it to arrive at completion precisely as it is drawn There might arise a problem of tension of the two films there might even be a problem of distortion Personally I am confident that it would work and be very desirable for making short duplication negatives One thing in its favor is speed At 90 feet per minute the sprocket would only need to turn about 30 revolutions from which it would seem that only lack of light would keep it from becoming an extremely fast printer Certainly 180 feet per minute would not strain the mechanism or constitute a threat to the safety of the film

There is a certain amount of pleasure in seeing something you have worked out come into being and I should like very much to watch this one take shape but the intent of this article is not so much the placing of this machine before the public as it is to serve as a sort of confession that whatever ideas come to me are in every sense of the word a gift from some source infinitely greater than myself Some may say I did so and so and I do too because popular concepts make it almost undesirable to state an accurate truth but under sober analysis I am forced to admit that without this something called consciousness which is unquestionably the mutual possession of every living soul I could not so much as stand

WITH GOOD REASON

FROM long experience, cameramen confidently rely on Eastman negative films to more than meet today's production requirements. Extra quality—reserve power—supports each film's special ability; and each is firmly established as the raw-film favorite, with good reason. Eastman Kodak Company, Rochester, N. Y.

J. E. BRULATOUR, INC., *Distributors*

Fort Lee Chicago Hollywood

PLUS-X
for general studio use

SUPER-XX
when little light is available

BACKGROUND-X
for backgrounds and general exterior work

EASTMAN NEGATIVE FILMS

brightness (64 divided by the tint time, 4, gives the brightness in actinos)

To save repetitions in taking a measurement, the meter is provided with 5 openings, which admit light from any surface, at 1/8, 1/16, 1/32, 1/64 and 1/128 hemispheric With a little practice the first trial *lid exposure with the meter enables a cor*rect reading of the surface brightness to be taken

From actual teaching experience for a number of years I can make the truthful statement that students understand and use *the two units mentioned as readily as they* would consider one and more men at a task

The unit of a value is its mental handle

As to the speed of films The speed of Plenachrome and Verachrome films is such that an exposure of one second with *the stop f 8 (64 steads) gives a perfect* result when photographing a 1 actino brightness subject.

If another film is twice as rapid, its 1 second exposure for a 1 actino subject will be the next smaller stop f 11 (32 steads), etc

Knowing the 1 second stop for any film when taking a 1 actino subject if any subject measures 4 or 32 actinos, only 1/4 or 1 32 of a second exposure will be needed with that key stop In short The actinos of any subject placed under 1, make a fraction which is the correct exposure for that subject with the key stop

This exposure as is already well known, can be modified for any desired stop by halving it on opening and doubling it on closing down the stop from the key stop *So much for "stills*

For the M P camera man Suppose you are using a pan film that is four times faster than Verachrome The correct stop *for a 1 actino subject with 1 second ex*posure will of course be four times smaller than 64 steads or 16 steads (or f 16 instead of f 8) Note that with the steads you have the problem in simple arithmetic

The usual M P exposure is 1/32 of a second *How many steads will be required* in a lens to photograph correctly a 1 actino subject in 1/32 of a second, when 16 steads requires 1 second of exposure The exposure is 1/32 of one second, so the stop will have to be 32 times larger than 16 *steads or 512 steads (This is the present* f 2 8 stop, but your lens need not have it as this 512 is merely a dividend, to be reduced as the subject measures more than 1 actino For example the usual neutral colored landscape in moderate sunlight measures say, 128 actinos Therefore the stop need only be 1/128 of 512 steads in value or 4 steads If you had steads on your lens, put the pointer at 4 steads Or note in the table that this value of 4 steads is now numbered f 32 in the f scale

For the M P camera your key exposure stop for the 1/32 of a second exposure is the stop that would take correctly in that time a 1 actino brightness subject. Divide that dividend stop, in this case 512, by the actinos of brightness of any subject and find the stop in steads, to use Why not cause and effect and simple arithmetic instead of the mess which now characterizes our craft and keeps its truths out of our schools?

Now let us see what the real trouble is Every physics book in the world has a figure similar to No 1 below

I have asked from five to ten thousand students, in English, Spanish and Portuguese, whether they thought that the bright*ness of the surfaces was caused by the* light which went out from the single point, as shown in the figure, or from the whole flame All have answered that the whole flame does the illuminating

I ask a student to go to the blackboard and draw *two lines which will enclose* between them all the rays which are going from the flame to the area They draw figure 2 for me without any hesitation

Then I ask 'Suppose that the large area had printing upon it, could all the letters but one, be covered over without changing the brightness of the one still exposed to the light?' They tell me "yes"

Q —"Then you hold that each letter on the area is independently illuminated?"

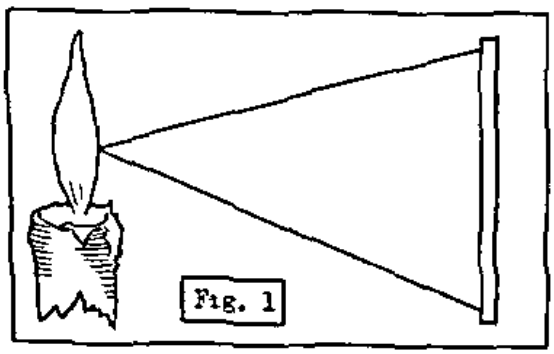
A —"Yes The rays which go to one letter do their work there and have nothing to do with the illumination on any other letter'

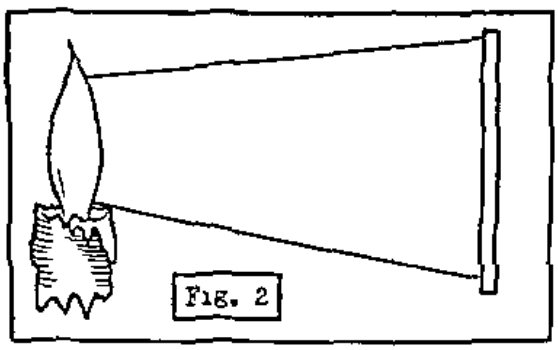
I then ask a student to draw two lines which include all the rays which go from the flame to a single letter, or to a period or comma in the printing They draw me figure 3

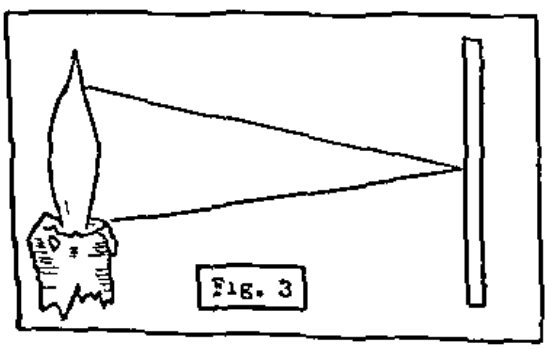
Now I draw the area only half as far away from the flame and ask a student to draw the two lines which illustrate the illumination of the single character Figure 4 is the result

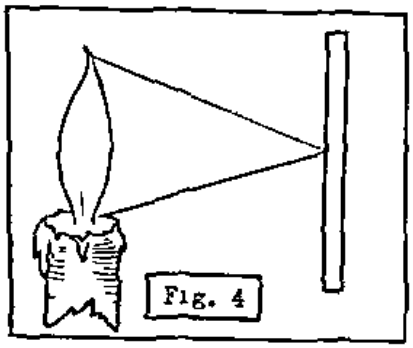
Now I ask 'Suppose that we touch the surface to the flame itself From how many directions will the rays now come to play upon each contacting character? They say "From a whole hemisphere of directions"

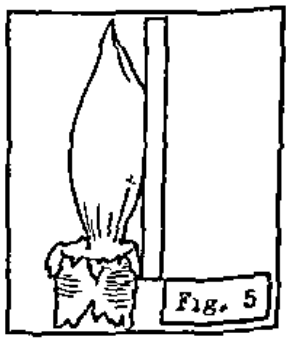
Figure 5 shows this truth with the dotted line











In figure 4 the children notice that the height of the flame makes the rays converge upon the single character, from double the vertical angle I then ask How about the width of the flame? Is it also twice as wide from that nearer distance? They see that it is and that therefore the flame sends rays to each character on the area from four times as many directions as at the half distance, thereby creating four times the brightness on each character on the area This is the law of inverse squares properly applied to the illuminating *of* points instead of to an imaginary illumination of things *by* points of light

If the light source in figure 4 were a circular gas flame seen edgewise, the ray convergence to each character on the area would be 1/8 hemispheric the same as in the largest opening in my actinometer

This same condition is also arrived at whenever any symmetrically formed light source illuminates an object at a distance equal to one of the source's diameters whether this source be a pin hole which admits light or a sun Under all such illumination a pure white surface is made 1/8 as bright as the light source because a full hemispheric source creates its own intensity on pure white

No camera exposure was ever made except by the illumination of the independent grains of salts in the film by the rays which converged upon each from the whole area of the lens stop employed

Equally true it is *That no object was ever made visible* except by the independent illumination of each of its surface molecules by all the light rays which converged upon each from all the light which was present in the hemisphere of space before the surface

All actual light sources occupy space, but the point source theory ignores their dimension and deals with all symmetrical light sources including the sun, as though they were points The result is the universal confusion regarding light intensity which we see about us after 300 years teaching of the point source theory in the schools

Probably ninety per cent of our students snap pictures and more than half their exposures are failures due mainly to under exposures or to snapping the pictures in too weak light

Scientifically and educationally their cameras are a joke when they really should be laboratory instruments to teach the precise measurement and use of light

While acknowledging the truth of independent molecular illumination by the rays which converge upon each molecule some teachers hold that so long as the law of inverse squares applies arithmetically to both spreading and converging rays it would be better to let the matter go on as now studied in the books I hold that in view of the present photographic chaos, through the inability of students to use light accurately any teacher who is content to teach students that which is not true should consider the matter carefully and reform his practice or surrender his certificate to teach

Every photographer who loves his work and every teacher who believes in accurate measurements should use his or her influence to put this Molecular Theory of Light Intensity in the school books so that students will be able to learn precisely how light functions with the same law of intensity at work in the camera as in open nature



PREY Hal Mohr, Local 659, IATSE who usually is behind the camera this time fell victim to the lens sharpshooting of Hyman Fink Hal whose photographic fame has been given top rating as an Academy Award winner for cinematography is the jovial gent at left enjoying an evening at Ciro's with his wife who is the popular Evelyn Venable of the screen, a young lady whose name unfortunately was not secured, and Stanley Cortez who needs no introduction to his fellow members of Local 659

FBI Cooperation Urged

● Asserting that there is no place for any ism other than Americanism in this country Harry M Warner president of Warner Bros Pictures Inc called on 6200 employees of his studio to cooperate in turning over all information and evidence of subversive activities in and out of the studio to the Federal Bureau of Investigation

Speaking to the first mass meeting of its kind in Hollywood which was attended by Warner employees and representatives of other studios the executive stated that the FBI alone could not cope with the expanding "fifth column activities of democracy's opponents. He called for an awakening of the public to the dangers threatened by the same subversive methods which laid Norway Denmark and Holland open to totalitarian invasion

Two Photographic Feats

● Unusual photographic effects will be a feature of the new Universal production "Spring Parade Deanna Durbin's new picture

The first 360 degree camera shot ever attempted will be performed by Joe Valentine cinematographer during the filming of the czardas dance sequences in order to secure fast panorama shots of the 50 couples who perform the fast and furious dance with Deanna and Mischa Auer

Setting of the scene is a dance floor completely surrounded by a cyclorama and buildings not only permitting photography from any angle but allowing the camera to be swung in a complete circle

To take advantage of the circular form Valentine and John Fulton, head of the trick camera effects department at Universal have developed a motor driven camera mounting which with a gimbal mounting spins the camera around on its tripod and in a vertical circular motion

Valentine also will attempt the longest trucking shot ever attempted at Universal when the camera will follow the singing star for a distance of 500 feet A specially constructed dolly will carry the camera as it rolls along with the actress

NEWS OF THE MONTH

Gatelee Heart Attack Victim

● Members of Local 659 IATSE, were shocked to hear of the sudden death June 21 of John Gatelee international representative Death resulted from a heart attack which occurred at his Springfield, Mass home Nationally known in the labor movement, he had been president for many years of the Massachusetts State Federation of Labor

Van Dyke Forms Battalion

● Responding to the speed up of America's defense preparations Major W S Van Dyke II United States Marine Corps Reserve will devote more of his time to active duty with his assignment as Commanding Officer of the 11th Battalion which is to be organized immediately

Major Van Dyke will personally recruit the battalion Applicants for service can be interviewed by him at Marine Corps Headquarters in the Federal Building on Monday and Friday nights or at his MGM office every week day and on Thursday evenings until ten

Men wishing to join must be from 17 to 35 years of age and have some previous military experience in United States services or with the National Guard the R O T C or military schools"

Personnel of the 11th Battalion will be required to report one night a week for active duty For this time those enlisted are to receive payment in accordance with their ratings

Fifth Column Hollywood Style

● Hollywood has been spending a lot of money lately outfitting a Nazi Fifth Column of its own

At 20th Century Fox alone they can outfit on short notice over 1 000 Nazi uniformed men, complete with all equipment. This number of uniforms will be put into use in the production of "I Married A Nazi" in which Irving Pichel is directing Joan Bennett Francis Lederer and Anna Sten

The uniforms include regular army troops of all ranks, brown shirted storm troopers, black uniformed Hitler guards and city policemen together with all side arms, packs and other equipment

This outfitting started when 20th Century Fox started work on "Four Sons" whose action takes place in the occupied Sudentenland With both pictures filming simultaneously the studio wardrobe and property departments have been working overtime to equip a maximum number of players and extras for Nazi roles.

Fixed Focus On Dancers

● If it weren't for the fact that he was the first to try out a new invention in movie making George Murphy would have felt himself insulted

In a ballroom sequence for "Public Deb No 1" at 20th Century Fox in which Murphy one of Hollywood's finest dancers, is supposed to dance with Brenda Joyce, the camera department came out with a new gadget to keep the dancing always within camera range while following them around the floor

Heretofore they had always used a wide hoop around the couple so that they could not dance outside its radius The hoop was always placed at the right distance from the camera attached to a pole

Now the camera "dolly" or truck has a small platform in front of it elevated just a bare inch or two above the floor Murphy and Brenda Joyce danced on this small platform while the camera truck moved all over the floor among the other couples, carrying the principals with them

George Murphy prides himself on his ability to perform any feat in dancing, including managing to keep within focus even without the hoop But the idea of initiating the new platform intrigued him and made him forget his dancing pride

Warner Bros 1940-41 Production

● Best selling books and outstandingly successful stage plays form the basis of most of the program of feature pictures which will be released by Warner Bros Pictures, Inc., during the season of 1940-41 it is announced by the company

Action will be the dominating keynote of the program lined up by Jack L. Warner vice-president in charge of production

"No production program in the history of any studio has been so rich in sound audience tested action material for the screen," said Mr Warner in a message to Warner sales and theatre forces

The line-up comprises 18 best-selling novels and biographies, 12 stage successes and 11 original stories Present plans call for 43 films to be released in 1940-41

Extremes In Hobbies

● Contrasts in degrees of following photography as a hobby are reported in the cases of two Universal players. Roland Young is said to be the film colony's most modest devotee of the art He snaps pictures with a $1 15 camera On the other hand Mischa Auer is experimenting with color photography in the professional size laboratory he has installed in his home.

G E. Lowers Lamp Prices

● A sweeping price reduction averaging 17 per cent affecting the list values of nearly one hundred types and sizes of Mazda lamps, effective June 1, has been announced by General Electric's Lamp Department

Most of the lamps affected by the price change are general-service types designed for a variety of uses in homes, stores, offices and factories. Included in the list is a wide range of tungsten filament fluorescent, and mercury lamp types This marks the company's twentieth major price reduction in lamps over a period of nineteen years.

Other lamps similarly reduced in price are specialty types for such fields as aviation movie projection and electric signs

Former and new prices of projection lamps affected are

Watts	*Former Price*	*New Price*
100 T-8	$.85	$.80
200 T-8	1 40	1 30
200 T10 Med Prefocus	2.20	2.00
200 T 10 Med	2.20	2.00
300 T 10	2.90	2.70
500 T 10	3.75	3.50
500 T 20 Med Prefocus	2 40	2.20
500 T 20 Med	2.40	2.20
750 T 12	4.50	4 10
1000 T 20 Mog Prefocus	5.25	4 75
1000 T 20 Mog	5.25	4 75
1000 T 20 Med Prefocus	5 00	4.50

Catalog Announcement

● Burke & James new Mid Year Clearance Sale Catalog is just off the press and ready for distribution Eighty-eight pages in length, it contains listings of more than twenty five new items of interest to amateur photo fans and professionals alike It can be obtained free simply by sending a penny post card to Burke & James, Inc., 223 W Madison Street Chicago Illinois. Ask for Catalog No 640

"Wyoming" Location Filming

● Location headquarters have been set at the Jackson Lodge in Jackson Hole with a supply base at Lander Wyoming for the filming of "Wyoming" new Wallace Beery starring picture

Plans call for a company of 100 people in the Jackson Hole region to operate over a radius of 250 miles of scenic wonders. Eight carloads of equipment, with portable camera devices for use in the roughest mountain country will be required by the unit under the direction of Richard Thorpe

Symphonic Shorts in Sound

● Bell & Howell s Filmosound Library an nonces for immediate rental or sale the first two of a series of "symphonic featur ettes," featuring the full orchestra and choir of the National Philharmonic Sym phony Orchestra, Inc , under the direction of Dr Frederick Feher In line with the current trend toward popularization of fine classical music, this outstanding musical body is now bringing to the theatre, class room, and private home the image as well as the performance of a great orchestra playing great music

A orchestra of 122 men, plus a chorus of 100 voices, make the first of the new re leases, "Aida," a musical experience long to be treasured Franz Schubert's "Rosa munde,' the second and latest release, is equally impressive Titles soon to come include 'Bridal Chorus (Lohengrin), 'Capricio Espagnol," 'Second Rhapsody' (Liszt), "Tales from the Vienna Woods" (featuring a special zither choir), "Stephen Foster Songs' (symphonic arrangement with mixed chorus), "Negro Spirituals' (with chorus) Altogether some forty sin gle reels are planned for the series

The films are available for rental and outright sale from all Bell & Howell deal ers and branch libraries "Aida" and 'Rosamunde' are now ready

35mm. Superpan Reversible Film

● In response to popular demand a fifth film—Superpan Reversible, has been made available by Agfa Ansco for the 35mm Agfa Memo Camera

This new Memo film is similar to that which has been supplied in 35mm cart ridges for Leica, Contax and other minia ture cameras, and provides users of Memo Cameras with a fast, panchromatic *revers ible* film that has many special applica tions

Salesmen, lecturers, teachers demon strators and others who employ 35mm film strips for projection purposes will find Superpan Reversible a valuable and time-saving material since the original film which is exposed in the camera, is developed by the reversal process direct ly to a positive of excellent projection quality This developing service supplied at a cost of fifty cents per cartridge by seven authorized Agfa Ansco laboratories throughout the United States and Canada, eliminates the need for preparation of a separate film positive

In addition to this ample speed pan chromatic color sensitivity and brilliant gradation, Superpan Reversible film pro vides fine grain—a characteristic that has caused it to be selected in many instances where the final photograph was desired in greatly enlarged form

Made in U S A by Agfa Ansco Bing hampton, N Y the new Memo cartridge of Superpan Reversible Film sells for $1 00 at photographic dealers gives 48 single-frame or 24 double frame exposures

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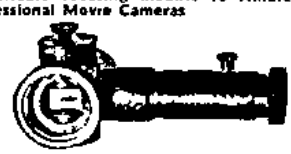
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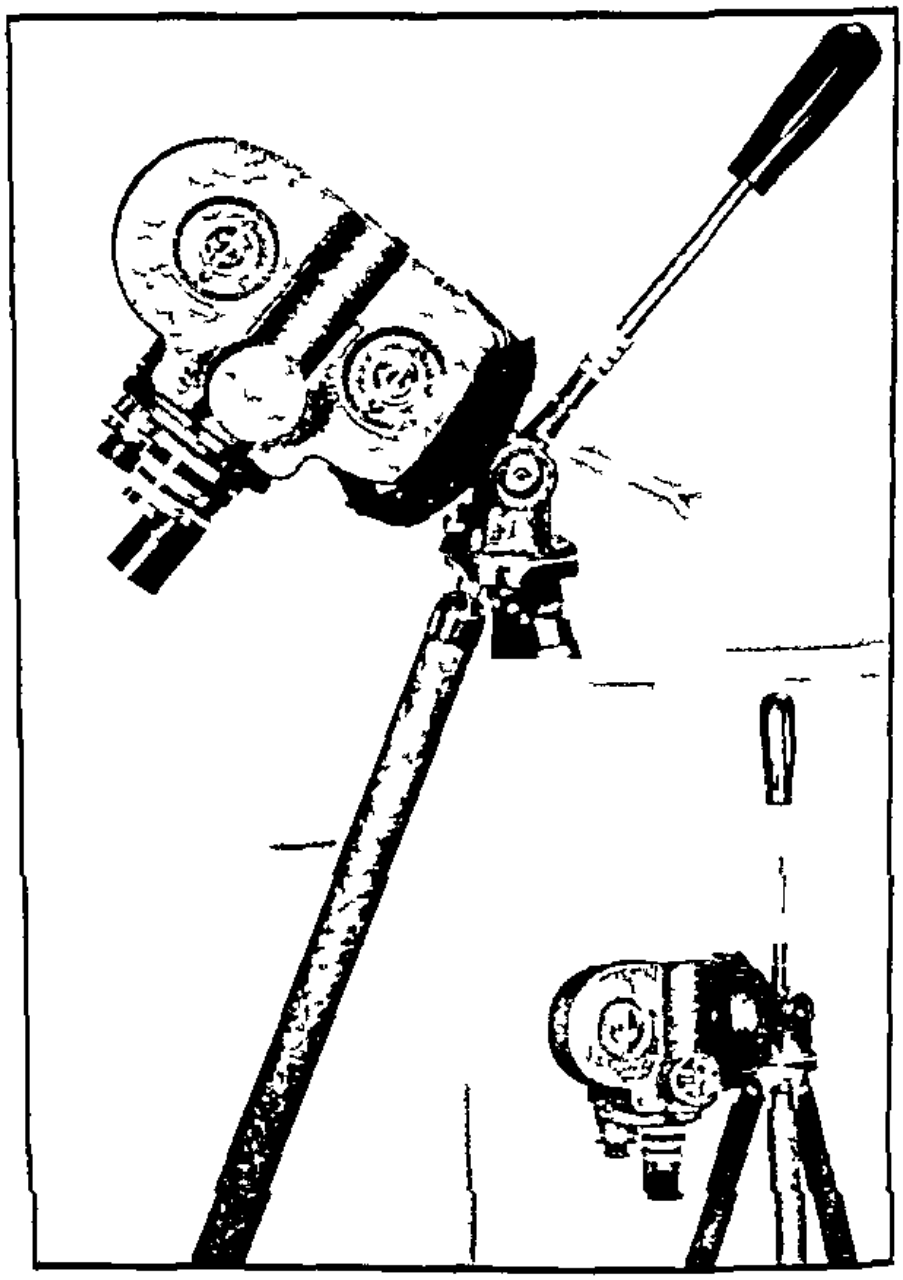
KALART

TRADEWINDS

Tripod Tilt Improvements

● Bell & Howell announces that a new feature of Filmo "All Metal" and "Tru Pan" Tripod is manual control of unrestricted tilt. When the new safety control-screw is set, the camera may be tilted at will down to an angle of about 50 degrees and of course locked firmly at any angle. B&H claims that this tilt range is far greater than most scenes call for and explains that the safety stop is provided at this point so that the camera may not accidentally slip out of control, tilt suddenly forward and strike the lens against a tripod leg.

However when the safety control-screw is released unrestricted tilt down to a full 90 degrees is permitted with the tilt lock functioning at any angle as usual. There is no increase in price of either tripod.



Arrow points to Bell and Howell safety tilt control screw with camera tilted to limit of safety stop. Inset shows how full 90 degree tilt is possible when screw is released.

Photolamp Prices Down

● Price reductions on all Wabash Superflash and Superflood Photolamps went into effect June 1, 1940, it was announced by A. M. Parker, President of Wabash Photolamp Corporation. The No. 0 size undergoes the most radical reduction to 10 cents, the lowest price at which flash bulbs have ever been listed.

A new size announced, the Superflash Chief, lists at 16 cents and produces 40,000 lumen seconds, comparable to the old Press 40. The new Press 40 has been stepped up from 40,000 to 50,000 lumen seconds although dropped to 18 cents, while the No. 2 has been stepped up from 56,000 to 70,000 lumen seconds, although dropped to 22 cents. Price reductions and increased light output figures are as follows:

	Light Output in Lumen Seconds		*Old Price*	*New Price*
	Old	*New*		
Superflash No. 0	25,000	25,000	$.15	$.10
Superflash Chief		40,000		.16
Superflash Press 40	40,000	50,000	.23	.18
Superflash No. 2	56,000	70,000	.29	.22
Superflash No. 2A	80,000	80,000	.30	.23
Superflash No. 3	110,000	110,000	.60	.40
Superflash No. 3B	47,000	47,000	.30	.25
Superflash No. 3B	85,000	85,000	.50	.45
Superflood No. 1			.79	.15
Superflood No. 2			.40	.30
Superflood No. 4			1.60	1.20
Reflector Superflood			1.10	.85

Agfa Formula Book

● Photographers who carry out their own processing of sensitized materials will be interested in the new and revised edition of the booklet— *Agfa Formulas for Photographic Use*"—which has just been published.

Including over forty five formulas which have been developed primarily for use with Agfa Ansco materials but which have general photographic application as well, the booklet lists formulas for developing, fixing, short top toning, reducing, intensifying and denitrizing solutions. A separate section of the booklet gives a detailed description in simple language of the chemistry of development and in the current edition presents new information on developer exhaustion and time-temperature compensation.

The booklet is priced at ten cents per copy and is obtainable through photographic dealers or by writing directly to Binghampton, New York.

Luxor Washing Tank

● Three new principles to provide maximum cleaning efficiency feature the new washing tank just marketed by Burke & James, Inc. It is known as the "Luxor Water Powered Tank No. 3." A novel

cellulose filter effective churning action secured through cross currents of water and a dish shaped bottom, are the new features

A length of cellulose sponge inserted into the intake pipe comprises the filter Although the flow of water is cut only about 10 per cent tests made by pouring a milky white liquid into the tank revealed that it emerged at the other end of the filter pipe as clear as crystal

The method of securing churning action by cross currents of water is different from that used in any other tank The dish *shaped bottom serves the very important* function of affecting the axis of rotation in such a way that prints do not adhere and settle at the center but are kept in constant motion It also allows the hypo to settle at the outermost edges from whence it is washed toward the baffle, trapped, and escapes through the vent The new tank is made at present in 16 inch diameter size accommodating up to 8x10 prints The list price is $7 85

Flash Data on Ruler

● A handy celluloid ruler containing metric and inch measurement has just been designed by the Kalart Company, Inc

On one side the ruler is calibrated from 1 16 to one inch and from one millimeter to 15 centimeters The latter is particularly useful to camera owners for measuring lenses for filters and sunshades

On the reverse side of the ruler is exposure information for both Mazda and Wabash lamps The 'Flash Factor System' of calculating exposures is explained and a definite factor is given for all lamps

These rulers may be secured by writing to the Kalart Company 915 Broadway, New York Ten cents in coin or stamps must be sent to cover cost of handling and postage Those sending for the ruler will also be placed on the mailing list to receive the new issue ow the Kalart Speed Flash Pictorial

Lutrix Exposure Meter

● Unusual versatility is claimed for the new Lutrix photoelectric exposure meter incorporating a number of novel features

Some photographers when using an exposure meter like to read combinations of exposure time and F stop others prefer to decide upon the shutter speed before hand and only want to read the required lens opening Lutrix exposure meter can be used with equal convenience for both reading methods The standard computer with which the meter is equipped permits to read all usable combinations of exposure time and lens opening

An additional computer is furnished with the *meter and can be fastened easily* in place of the other one When converted in this way the exposure meter lends itself to pre-setting of the desired exposure time and indicates F stop directly With the pre setting computer the meter is *especially suited for cine camera work, no* re setting of the scales being required from one shot to the next

The Lutrix is of smooth design and extremely compact It can easily be carried strapped to the wrist like a wrist watch, *thus saving time and effort* in manipulation and leaving both hands free to operate the camera

The new meter is highly sensitive and covers the complete range of light combinations occurring in practical photogra

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phy up to the most brilliant sunlight on snow or water. Greatest simplicity of operation is claimed for the instrument, the operating instructions being given in a few words on the face of the meter. The computer is laid out in half stops and comprises the range of film speeds from 3 to 800 W. and from 3 to 32 SCH.

The price is $13.75. Intercontinental Marketing Corporation, 8 W. 40th Street, New York City, announces.

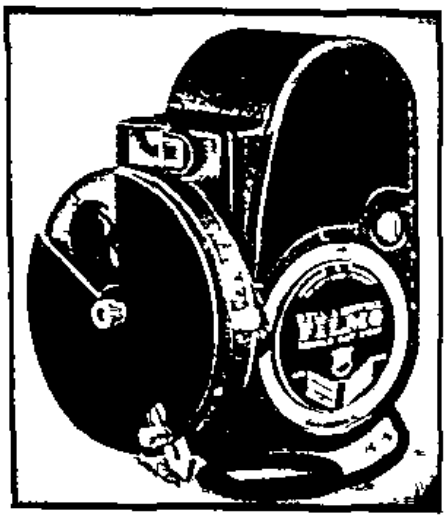
Automatic Filmo Fader

● One of the interesting features of the new Filmo Fader announced by Bell & Howell, is an adjustable arrow indicator visible in the camera viewfinder which shows when fades and wipes are completed. Thus, it is claimed, these professional effects for "dressing up" home movies are possible with the hand held camera as well as with the camera on a tripod.

The new fader which is said to be entirely automatic, fits all makes of 8 and 16mm cameras and will make professional fade-ins, fade-outs, wipe-ons, wipe-offs, and when the camera is equipped to rewind the film, the transitional lap-dissolves. Furthermore, Bell & Howell states that the fader can be mounted at any angle so that wipes may be made to appear or disappear from any direction.

The announcement states that the new accessory is a true fader in that fades are made with a rotating disc which is graduated from opaque black to a clear sector and back again to opaqueness.

Operation of the Filmo Fader is extremely simple, says B&H. The mechanism is wound by moving the arrow through a single revolution. A light touch on the trigger releases the graduated fading disc which then rotates from opaque black to the clear sector, thus fading in the picture. Another touch and the disc completes its revolution to fade out the scene. Wipe-ons and wipe-offs are made in the same manner by attaching the wipe disc which is supplied with each fader. In both cases the operator sighting through the viewfinder sees the indicator move out of his vision when the trick transition is started, and back into sight again as the final fade or wipe is completed.



New Filmo Fader with wipe disc attached, mounted on "Sporster 8." In the illustration a wipe-on has just been completed with the lens opening clear.

Speed Flash for Argoflex

● A special model Micromatic Speed Flash for use with the new Argoflex camera has just been announced by the Kalart Company. Fast action shots in any light can now be captured with this newest reflex camera when used with the Kalart Micromatic Speed Flash.

This special synchronizer for the Argoflex camera will be available in both the Standard and Master Kalart models. The Standard model sells for $11.50 and the Master model for $14.95. It is recommended that the extension bracket be used for both models.

Speed Flash shots up to 1/200th of a second will be possible with this All American combination.

S O S Takes Sun Arc Line

● Carbon Products Company, former distributor of projection arc and photographic carbons imported from Champion Electrical Works, London, England and Compagnie Lorraine de Charbone, Paris, France, have sold their entire stock to S O S Cinema Supply Corp., of New York.

These carbons were formerly sold under the trade name of Sun Arc and will be continued by S.O.S. under that brand as well as their own international label.

Color Titles Service

● Substantial savings in the price of professionally photographed titles for the 16mm and 8mm camera owner are offered by Orbit Title Films, 5437½ Hollywood Blvd. Color titles are photographed on Kodachrome and processed by Eastman. A variety of special color effects, stock backgrounds and main titles are available, it is announced.

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PATENTS

By ROBERT W TULWIDER
Patent Attorney, Los Angeles

No 2 197 184 — FLEXIBLE LENS SHADE *Robert S Kemp* Alhambra Calif Appln Aug 12 1938 2 claims
A lens shade formed of flexible resilient material and having a cylindrical portion and an expanding conical portion joined together

No 2 197 311 — COLOR FORMING DEVELOPER AND PROCESS OF COLOR DEVELOPMENT *Philibert J J R Merckx* and *Willem K Antoon Korber* Belgium assignors to Gevaert Photo Producten N V Antwerp Belgium Appln May 13 1939 In Great Britain May 23 1938 16 claims
A color forming developer comprising an aromatic amine developing agent and a color coupler consisting of a diaryl methane

No 2 197 871 — SYNCHRONIZING TESTER *Samuel Mendelsohn* Brooklyn N Y Appln July 12 1938 Renewed April 12 1939 12 claims
A device for testing the speed of camera shutters by tripping the focal plane shutter and then after a predetermined interval tripping the between-the-lens shutter

No 2 197 994 — COLOR PHOTOGRAPHY *Colin Butement* England assignor to Dufay Chromex Ltd., London England Appln Aug 26 1938 In Great Britain Sept 10 1937 3 claims
A method of developing color films having at least three superimposed emulsions sensitive to red green and blue light respectively and containing a ferric compound a nickel compound and a lead compound respectively

No 2 198 417 — CAMERA CONSTRUCTION *Gordon B Scheibell* Millburn N J *William O Scheibell* administrator of said Gordon B Scheibell deceased Original appln Apr 18 1935 Divided and this appln Nov 4 1937 8 claims
A motion picture camera adapted to be held in the hand and having a series of trigger controls one for each finger for controlling the length of time the camera will run without stopping

No 2 198 678—ART OF MAKING STEREOSCOPIC PROJECTION OF PICTURES *Edmond H V Noaillon* Brussels Belgium Appln June 25 1937 In Germany June 26 1936 4 claims
A screen for the projection of stereoscopic pictures having a series of spaced filter screens in front of the main screen to filter the left eye picture elements from the right eye and similarly for the left eye

No 2 198 815—COMPOSITE PHOTOGRAPHY *Byron C Haskin* assignor to Warner Bros Pictures Inc Original appln Apr 11 1933 Divided and this appln Oct 14 1938 2 claims
A method of increasing the light intensity of projected motion pictures by using a plurality of projectors with objective lenses giving the same degree of magnification and moving the film instead of the lens for focusing

No 2,199 057—COLOR CAMERA *Desmond Tuck* and *Alfred T Stuckland* England Appln Feb 21 1939 In Great Britain Sept 1 1937 3 claims
A color camera making use of a filter strip having successively differently colored areas and moved with the film

No 2 199 175 — DEVICE FOR COPYING FILMS. *Jan J Harlenberg* Netherlands assignor to N V Philips Gloeilampenfabrieken Eindhover Netherlands Appln July 16 1937 In Germany July 20 1936 4 claims
A device for printing perforated films having different degrees of shrinkage and making use of a variable frictional drive for the different sets of sprockets

No 2 199 119—CAMERA MAGAZINE EJECTOR *Gordon Brown Scheibell* Millburn, N J William O Scheibell administrator of said Gordon B Scheibell deceased Original application April 18 1935 Divided and this application April 30 1936 5 claims
A member adapted to eject the magazine of a magazine camera when the compartment door is opened

No 2 199 715—FILTER FOR THE PHOTOGRAPHY AND PROJECTION OF COLORED PICTURES *Hans Sauer* Germany assignor to Zeiss Ikon Aktiengesellschaft Germany Application January 27 1938 In Germany January 29 1927 4 claims
A polarizing light filter which has one element which absorbs a greater portion of light of shorter wave length and another member which absorbs a greater portion of waves of longer wave length thus producing a substantially neutral gray dimming of light of all wave lengths

No 2 199 764—FILM MARKING APPARATUS *Albert W Tondreau* Glendale Calif, assignor to Warner Bros Pictures Inc New York N Y Appln Nov 12 1938 Serial No 239 942 6 claims
Means for marking a film by directing a beam of light to a portion of it

No 2 199 902—PHOTOGRAPH *James R Alburger* assignor to Radio Corporation of America Appln April 12 1938 2 claims
A photographer including a reduced silver image and a coincident aluminum hydroxide mordant image

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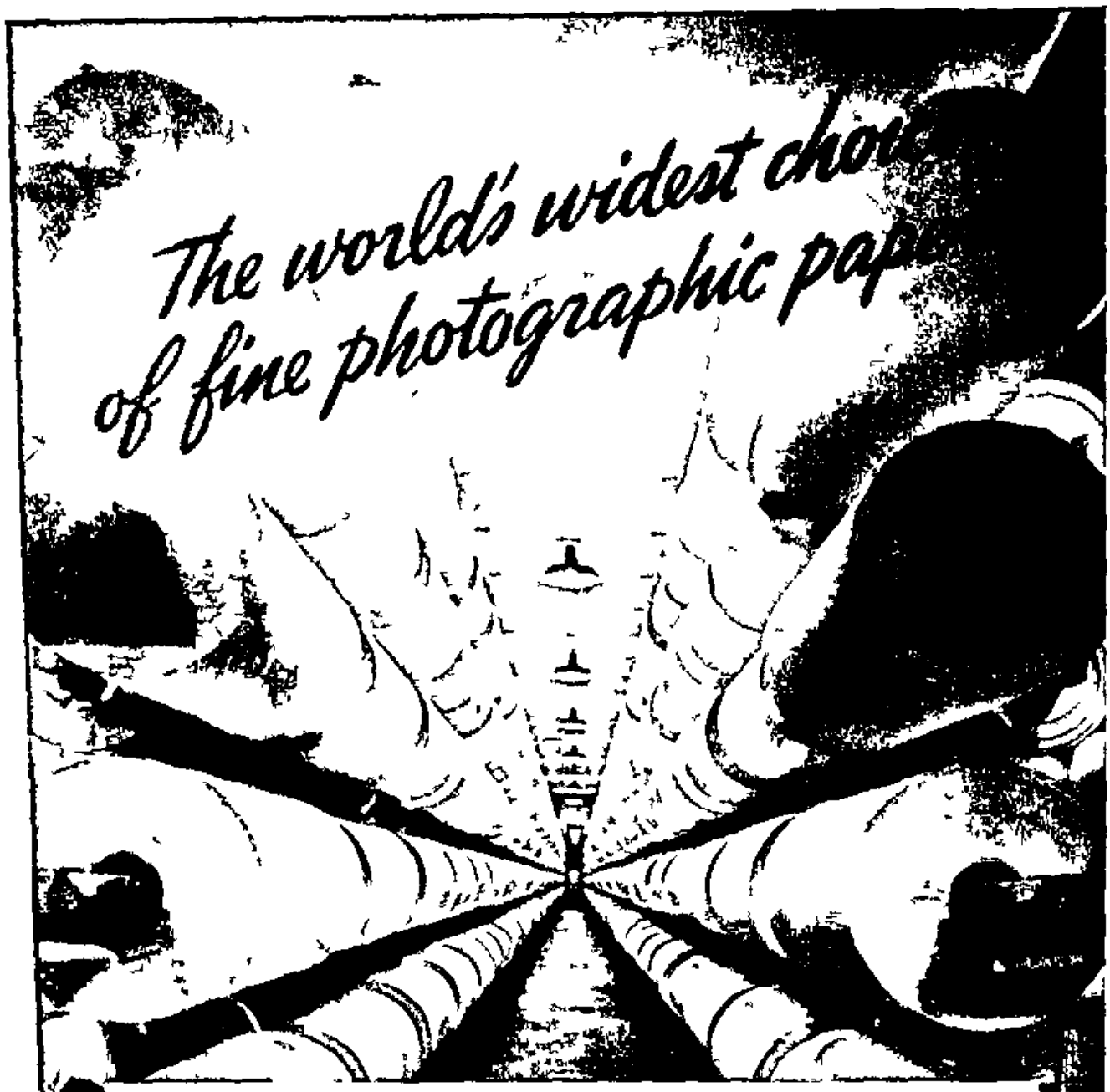
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For complete data on the characteristics, purposes, and manipulation of the papers mentioned and others, write for the 48-page booklet *Eastman Photographic Papers* (price 15 cents). It is a dependable guide to best results.

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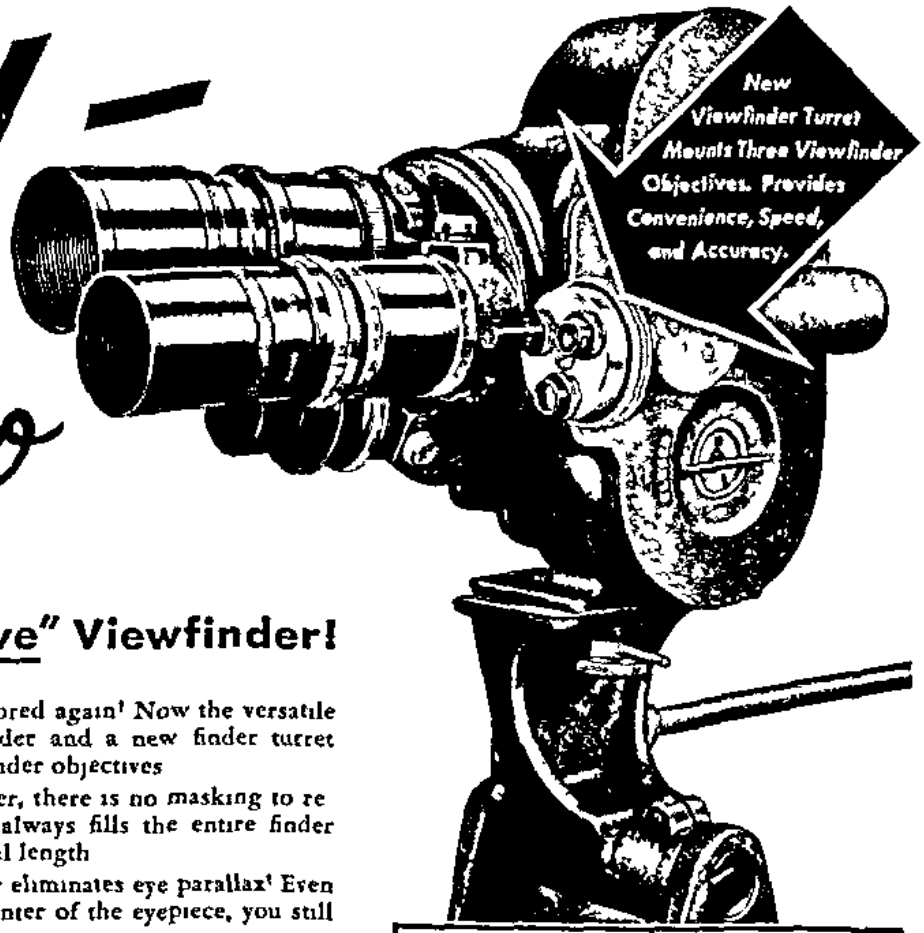
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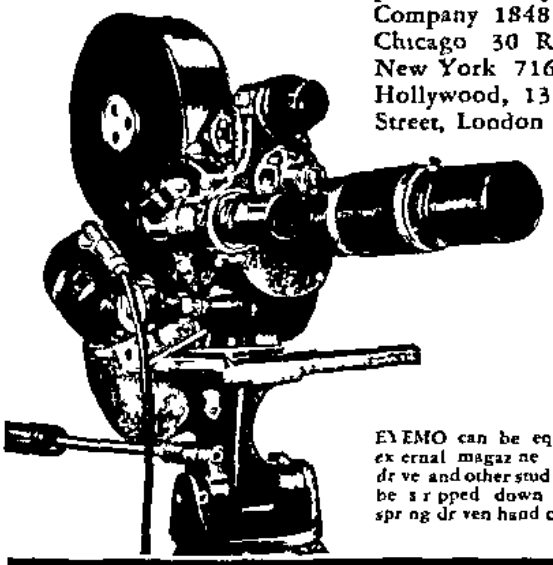
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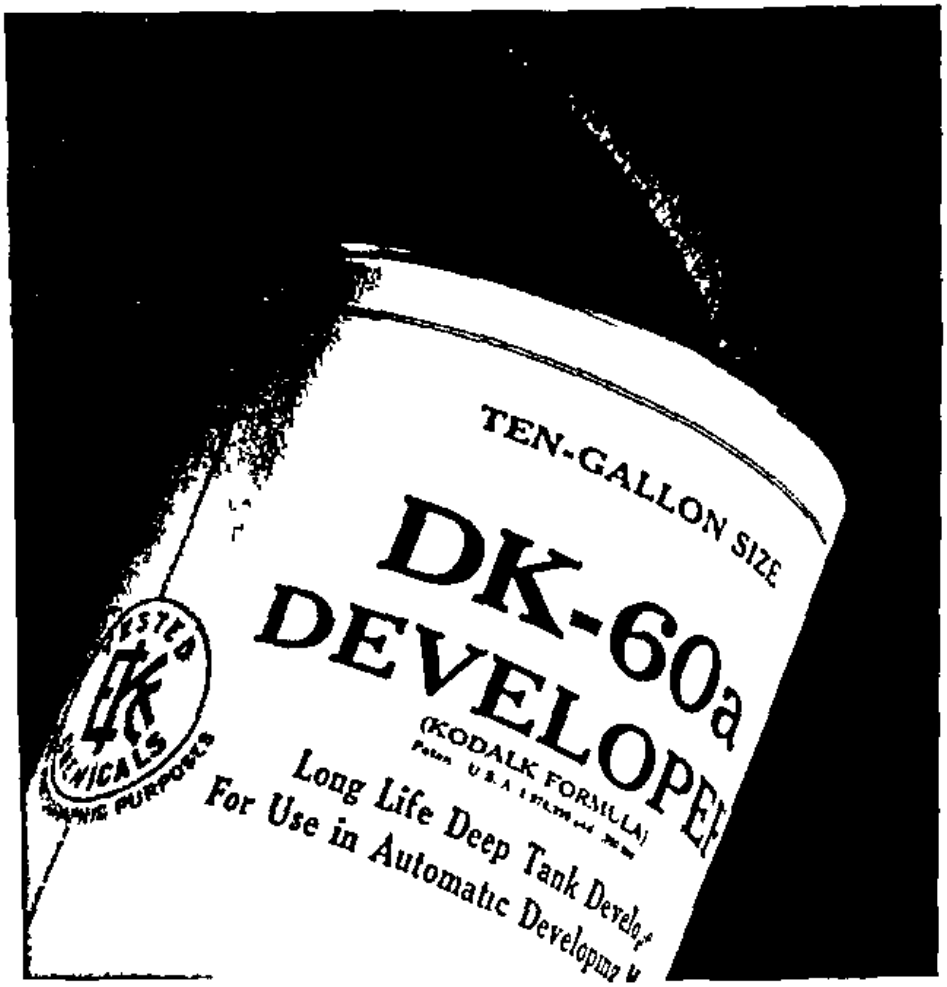
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INTERNATIONAL photographer

Vol. XII August, 1940 No. 7

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On the Cover

Virginia Bruce's blonde beauty is captured with all its charm in this portrait by Ray Jones member of Local 659, IATSE The photograph was taken by Jones for the Universal Pictures' production "Hired Wife" in which Miss Bruce is starred

Editor, HERBERT ALLER

Art Editor, JOHN CORYDON HILL, *Business Manager*, HELEN BOYCE

Contributing Editors LEWIS W PHYSIOC, FRED WESTERBERG, D K ALLISON, GEORGE HURRELL, J N A HAWKINS, PAUL R CRAMER, WILLIAM COSTYNS, G M HAINES ROMAN FREULICH, ERNEST BACHRACH, ALVIN WYCKOFF, WILLIAM V DRAPER

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INTERNATIONAL PHOTOGRAPHER as the monthly official publication of International Photographers Local 659 of the International Alliance of Theatrical Stage Employees and Moving Picture Machine Operators of the United States and Canada not only represents the entire personnel of photographers engaged in professional production of motion pictures in the United States and Canada but also serves technicians in the studios and theatres who are members of the International Alliance, as well as executives and creative artists of the production community and executives and engineers of the manufacturing organizations serving the motion picture industry INTERNATIONAL PHOTOGRAPHER assumes no responsibility for the return of unsolicited manuscripts or material

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king of the kenai

By CHALMER D SINKEY
Movietone News

★ No place too far no situation too difficult when there is a newsreel feature to be secured, such as this expedition into the heart of Alaskan wilds to photograph the kingly Kenai moose on the shores of Skilak Lake

THE CALM cold waters of Gastineau Channel glistened and sparkled in the early morning sun, as the motorship *Seal*—one of the Alaska Game Commission fleet—set sail from Juneau Spring had come to Alaska and the long awaited voyage to the home of the world famous Kenai moose had finally begun

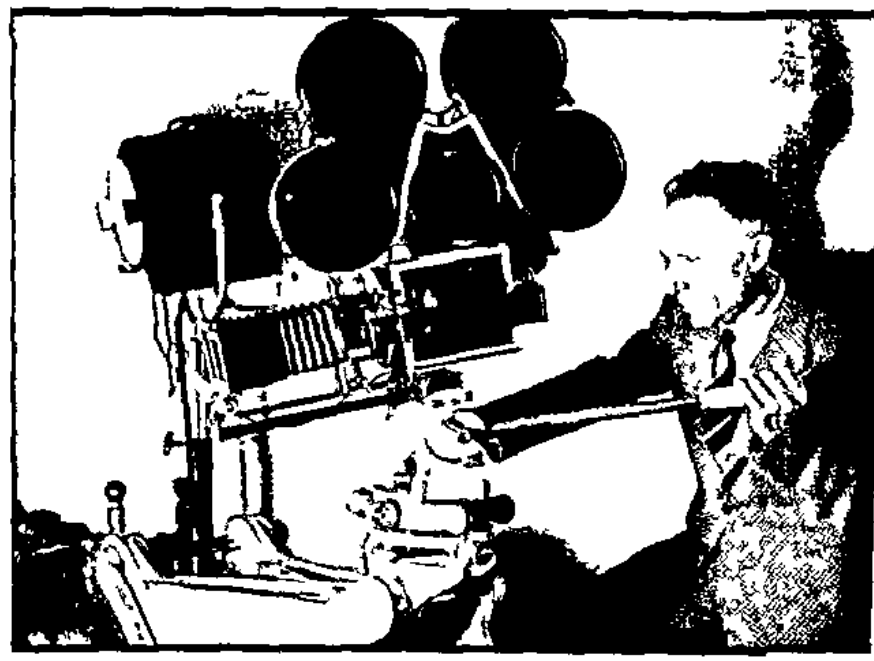
Juneau soon was lost in the lap of its towering snow crowned mountains Douglas from whose chimneys poured the smoke of newly started fires slipped silently by Beyond the channel inlet, loomed the spruce-clad slopes of Admiralty Island where lies the wreck of the *Islander* Seattle bound years ago this ship struck the rock bound Alaska mainland Taking many of its passengers and crew and a shipment of gold from the westward it sank swiftly through the icy depths

Passing this storied rusting hulk, we sailed through a world of blue green water and forest clad snow capped mountains revolving around a miniature white light house Always before us were green islands slowly emerging from a lazy sea to vanish again in the sparkling icy waters as we left them behind

When the sun was gliding to rest in the North Pacific we neared Cape Spencer A south bound freighter its endless black smoke-tail dragging the sea slipped into the shelter of Inside Passage as our little ship began to roll and toss on the restless waters that opened into the Gulf of Alaska The twilight hours were long and we traveled in view of the snow capped mountains of the St Elias Range In breath taking splendor St Elias stood high above them all

Crossing the Gulf of Alaska in a small boat is a never to-be-forgotten experience especially for one not accustomed to the sea Most of us welcomed the quiet sheltered waters beyond the Gulf and especially Resurrection Bay with its towering walls of rock There with Seward and the end of our five day voyage in sight three whales played side by side cavorting on the surface of the water just beside our ship Having been prepared in advance by Ken Talmadge the skipper who promised us whales in Resurrection Bay we had the hand held Eyemo ready and recorded this frolic with the camera set at 48 frames

At the dock we were met by Henry Lucas known to moose hunters who come to Kenai from all parts of the world "Hank knows the moose and his habits as well as he knows the Kenai's forests of dark green spruce and silver birch or its beautiful lakes and rushing rivers It was he who was destined to guide our party during the weeks that followed



The author with his Bell and Howell Cine Color outfit equipped with special dolly and lighting details

The trip from Seward to the heart of the Kenai moose country was made by river boat across Kenai Lake thence down the upper Kenai River—its only outlet Normally a swift flowing stream the Kenai was a raging torrent whose angry roar could be heard for miles

Sweepers and log jams are the greatest hazards to be encountered when running an Alaskan stream during high water period Standing in the stern of our river boat *Moose* with its powerful four cylinder outboard motor Hank, our guide and pilot could in some mysterious manner see into the depths of the dense forest and beyond the bends of twisting gorge through which the furious river charged From a perplexing vista of foaming waterways he always chose the safe one

Crossing Kenai Lake earlier in the day we wondered how our light river boat could carry the excessive burden that we had placed upon it a party of four nearly a ton of supplies and complete Bell & Howell moving picture equipment Put after the angry river had tossed our heavily laden *Moose* over the swirling rapids pounded it through the drowning forests and poured it eventually into Skilak Lake we realized that an Alaskan river boat could survive a terrific beating

We were delivered more or less safely and completely at the very doorstep of the home of the Kenai moose These lordly fellows are famous for their large antlers The necessary elements for building their enormous horns are to be found in the Kenai moose licks The most popular lick of all was in a swampy terrain just a few minutes by trail or boat from our primitive cabin which stood on the shores of beautiful Skilak Lake

Early mornings and late evenings were busy times at the moose licks From our blinds we would watch and film the animals less than three hundred feet from our cameras As many as six bulls young and old would be in the lick at one time eating the mud or sipping the muddy water An occasional cow would join them but her stay would be short Her nervous actions and frequent glances toward a nearby birch thicket told us where she had hidden a baby moose to which she was anxious to return One of the most dangerous animals to be encountered in the Alaskan

wilds is a mother moose defending her young Sharp heavy hoofs wielded by long swift front legs are weapons feared by man and beast alike

It is difficult for a moose to distinguish objects, but he is quick to detect movement, and his ears and sense of smell are especially keen Neither a moose, nor any other animal of the wilds can be approached except up wind

We had no control over the breezes while working near the licks but the blinds constructed from spruce boughs and other native materials afforded perfect protection and fine visibility Camera noise was reduced almost to sound studio standards by heavy padding A hand wheel inserted in the winding key socket of the spring driven Eyemo was used to stop the camera silently by hand friction Telephoto lenses up to twelve and one half inches were used In many shots made from the blind we were so close that the head of the animal filled the finder

It was never tiring to watch these interesting majestic animals Even in bad weather when shooting was impossible we sat out the daylight hours in the blinds lone spectators at the greatest show on earth Bulls who in mating time would be deadly enemies, met at the lick and together ate the mud which helped build the mighty weapons for tomorrow's battle In nearby meadows other battle scarred monsters would stare at each other by the hour as motionless as statues In springtime peace reigns in mooseland but in early autumn the bull's fancy turns to thoughts of love with all the tenderness of a tornado

A long spring day was ending Sitting in the blind which had been set up on a moose trail we felt and heard the dull heavy thud of ponderous feet approaching from the rear Closer and closer they came as we sat hidden and breathless One move and we would have alarmed the approaching animal Not until it detoured our blind did we dare look out and up Less than six feet away four towering legs supported a huge swaying body One end of enormous neck was fastened to it and on the neck's other end crowned by a pair of antlers that filled the sky were all the heads of the twenty mule team rolled into one The King of the Kenai heading for his horn tonic was passing by!

But our stay in Mooseland had to end

We were due to hurry back to Chicagof and Admiralty Islands Alaska's silver horde would soon be booming up the waterways There's action to be had when the brown bear is fishing And so Hank Lucas and Harold Galwas of the Alaskan Game Commission took the river boat with cameras remnants of food and supplies on a thrilling ride up river Jay Williams of the Forest Service and the cameraman took the trail alongside carrying the precious exposed film in back packs Not that we didn't trust Hank—but well just because

THE GREAT BARRYMORE

JOHN BARRYMORE who made the profile famous came back to Hollywood after an absence of a year and a half from the screen to star in "The Great Profile" for 20th Century Fox Still the colorful, legendary figure of old Barrymore proved an interesting subject for a series of still shots made by Gene Kornman member of Local 659 IATSE.

Incidentally the pictures of the famous star re-emphasize a point of portraiture expounded by Ernest Bachrach, also a Local 659 member, in the December, 1939 issue of INTERNATIONAL PHOTOGRAPHER Bachrach who is an esteemed portrait artist for RKO Studios, outlined then the importance of skillful attention to the utilization of hands for complementing facial expressions, for strengthening moods and for creating interesting compositions.

Barrymore himself served as a testimonial to the theory He pointed out that a player may be good or bad in direct ratio to the effectiveness of methods employed in the use of hands In other words hands may be the difference between good or bad acting and consequently may be a factor in determining good or bad photography

Before beginning to shoot his stills, Kornman reflected The public has seen Barrymore from virtually every camera angle but to what is his prominence attributed? It is only because of a handsome face or is it because of his effective technique and complete mastery of the Thespian art? Having his own answer to the questions he asked Barrymore

How can the still cameraman best help *the actor? Is there something he* can do to photograph him so that he does not appear to be the same character every time his picture is taken but actually acquires a different personality?

Barrymore smilingly replied If you will photograph me when I am conveying different thoughts permitting me to express both meditation and resistance to external force bearing in mind that the background is irrelevant concentrating upon the head and the hands you will succeed in accomplishing your objective You will see four different Barrymores without the use of props backgrounds or different lights'

With this suggestion in mind and aided by Barrymore's sincere cooperation Kornman swung his camera into action producing a series of stills from which the four on the opposite wage have been selected for reproduction as ably illustrating the potency of hands in photographic composition

Compare the Hamlet poses The one at top is static, although the position of the hand upon the hilt of the sword might be suggestive of possible action For example an entirely different thoughts would have been conveyed had the hand been resting upon the belt However the opposite feeling is depicted in the lower Hamlet Here is animation Although it is a still it has quality of photographic movement, a feeling that is developed through the skilled use of hands in the composition

Hamlet partakes of the forceful virile qualities created in Shakesperian history

On the other diagonal the famous profile is presented in the habiliments of the man about town matinee idol types At top is a challenging pose while below with hands placed to support the chin a reflective mild and unassuming mood is created

According to studio officials not even Barrymore knows how the handle "great profile" originated Milton Sperling author of the script, says Barrymore coined it himself when he first was on the stage Then playing in slapstick comedies, he said he wanted to go into drama because as he was supposed to have said I have a great profile" Barrymore denies this story with regrets He admits it is a logical explanation and wished he had coined it but declines to take credit

Nevertheless, Barrymore said that whoever coined the phrase must *have been* referring only to his left profile Whenever possible he avoids showing too much to the right side of his face which is less expressive and on which the trick eyebrows do not work as well as on the left side

He will never object to working his right profile and what he considers the most gracious gesture made toward him was made by Greta Garbo in this connection When they were filming 'Grand Hotel together there was a love scene they were to play together in profile Everything was set up so that Barrymore was to play it with the right side of his face Having heard about his left preference Garbo spent her lunch hour supervising the rearranging of the set so that it could be played Barrymore's way

THE GREAT PROFILE



WAR TAKES CAMERA TOLL

DESTRUCTION or confiscation of camera equipment valued at thousands of dollars is one of the prices being paid by newsreel companies in covering the European war for moviegoers, according to Norman Alley Universal newsreel ace cameraman and member of Local 659 IATSE, who has just returned to Hollywood after nine months in the war zone.

Alley who won worldwide recognition for his action shots of the *Panay* bombing by Japanese aviators, had his complete camera equipment "interned for the duration of the war" by Germany. During the attack on Boulogne camera casualties ran high. Paramount News, Universal, Gaumont British and British Movietone all suffered heavy losses. One outfit was just about to be picked up by truck when an air raid was sounded and while the driver watched from a shelter the hotel housing the equipment was blown to bits.

So far as could be determined all cameramen have escaped safely. Nevertheless they have been subjected to extreme risks in carrying out their hazardous assignments at the front. Dodging the bullets, planes and tanks of blitzkrieg warfare is a miracle that makes the loss of camera equipment only an incident in the complicated job of keeping in condition to even operate a camera.

Alley was with the German army for an extended time, particularly during the hectic days when Hitler's hordes overran the Low countries. He was the only American newsreel cameraman accepted by the Germans prior to and during the invasion.

It was an amazing contrast, Alley said, to have been on the scene in China when a few bombs were dropped on the *Panay* and then to be an eyewitness while a city like Rotterdam was subjected to a smashing concentrated attack that in just twenty minutes completely demolished an area of 2"0 square blocks, followed by an avalanche of soldiers dropping by parachutes with their bicycles, light cannon and necessary supplementary equipment for *consolidating their gains*."

Indicative of the high price paid for German victories is Alley's statement that, on an average, one in ten of the parachutists suffers broken legs. The new type invader is extremely young, ranging in age from sixteen to twenty one years, according to Alley. *They are the product of five years training and preparation schooled rigorously to perform their mission of conquest.*

An interesting photographic sidelight to this new development in warfare is an account in the June-July issue of *The Cine Technician*, English publication of a prophetic leap by a parachute cameraman. The article, by Kenneth Gordon, states:

> Now that Britain watches daily for troop carrying 'planes I wonder how many of the cinema world remember that some years ago a British newsreel cameraman jumped from a 'plane some thousands of feet up carrying a complete automatic camera equipment and filmed while he descended to earth.
>
> Yes, Frank (Taxi) Purnell performed this feat when he was on the staff of Universal News and his resulting pictures were published in that reel. He landed with his camera quite safely that time. He was less lucky recently when a taxi got him down Wembley way but he is out of hospital now, fit and well.

As for Alley, when asked how he liked being a roving cameraman he replied decisively, "Los Angeles for mine!"

16 mm Department

Important news to professionals and amateurs interested in 16 mm photography is the announcement that beginning with the September number INTERNATIONAL PHOTOGRAPHER will present for its readers a page devoted to that field of the camera art. The new feature will be conducted by Fred Gately who is widely known and experienced in 16 mm camera use.

Motion Picture Theatre Tally

● As of January 1, 1940 there were approximately 67,129 motion picture theatres in 98 countries throughout the world as compared with 92,816 theatres on January 1, 1939 according to a world market survey prepared by Nathan D. Golden, Chief of the Motion Picture Divisions of the Bureau of Foreign and Domestic Commerce. In explanation of this large decrease Mr. Golden points out that in the 1939 compilations nearly 30,000 *so-called theatres in Russia which were nothing* more than meeting halls for workers where pictures were shown have been dropped as motion picture theatres and only such theatres in Russia where an admission charge is made have been incorporated into the survey.

The number of theatres wired for sound throughout the world during 1939 shows a decrease of 1,356 installations. On January 1, 1940, 65,006 theatres were wired as compared with 66,362 theatres wired as of January 1, 1939.

On January 1, 1940 a total of 35,936 theatres were in operation in Europe with 34,694 wired for sound, as compared with 63,043 of which 37,578 were wired for sound on January 1, 1939. This decrease as noted above is due to the elimination as theatres of the many halls in Russia.

Latin American countries show an increase in new theatres and those wired for sound during 1939.

The Far East also shows an upward *trend in theatre construction*. As of January 1, 1940, 6,568 motion picture theatres were in operation of which 6,220 theatres were wired for sound as against 6,201 theatres of which 5,796 were wired on January 1, 1939.

In the Near East and Africa theatre expansion has kept pace with other world markets. On January 1, 1940, 968 theatres were in operation with 951 wired for sound as against 831 theatres of which 836 were wired for sound on January 1, 1939.

Trade paper and industry estimates indicate that on January 1, 1940, 17,003 theatres all wired for sound were open and in operation in the United States as compared with 16,251 motion picture theatres on January 1, 1939.

PARTY LADY

ELSA MAXWELL, the lady who showed Hollywood how to throw a party and who is the premier party thrower of the nation, goes in for character parts when in the mood. Recently she went Early American, personally impersonating Benjamin Franklin while Charlie Ruggles gave a facsimile of good old "Uncle Sam."

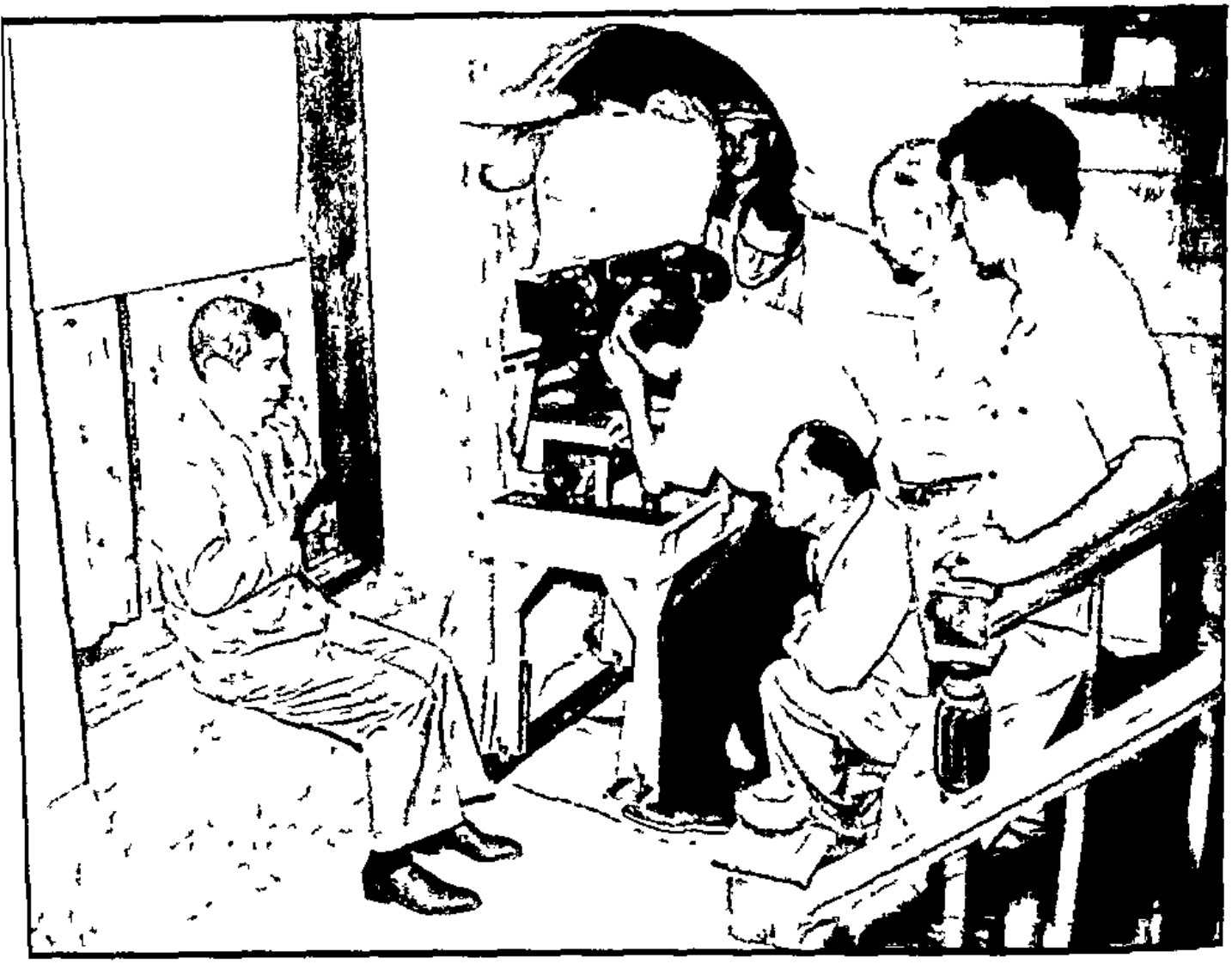
Milton Gold, member of Local 659 IATSE, who made the photographs of Elsa, relates an interesting story showing the care and research devoted by studio photographers to assuring good pictures. Before actually unlimbering his camera he went to the public library and made a comprehensive search to unearth all available reproductions of paintings or sketches of Franklin. Particularly he noted the shape of his head, the way his hair was combed and his general posture and physique. Then the pictures were analyzed from the standpoint of light sources indicated by the artists.

To photograph Elsa Maxwell so that she would look as much as possible like the distinguished American patriot, Gold determined that it would be necessary to light the set so that it would have every resemblance to old fashioned lamplight. Or if it were a daylight interior shot to make certain there was a flat light (accomplished by diffusers) as though the sun were right in the room.

Ordinary procedure would have been to photograph her in the standard formula with its hard shadows, intense highlights and other elements of modern photo technique. Such anachronism was avoided by the study of early pictures and proper attention to makeup, application of which was personally supervised by Gold.



In "Public Deb No. 1" Elsa Maxwell, the famous party lady, throws a patriotic party in which she impersonates Benjamin Franklin (top) while Charlie Ruggles rigs himself up as Uncle Sam. The story behind the lighting of this and other stills for the picture is related on the facing page by the photographer, Milton Gold. Below, Ruggles and Miss Maxwell are shown with Brenda Joyce in another scene from the picture.



A simple solution to a difficult problem was devised as shown above and described below during filming of Joe E Brown's new picture So You Won't Talk a Columbia production In addition to the star the photo shows (left to right) Enzo Martinelli assistant cameraman Jack Russel operator Al Siegler first cameraman Fred Kaufer assistant cameraman all members of Local 659 IATSE and Ray Rich first grip member of Local 80 (Photo by B Anderson)

By Enzo Martinelli, Assistant Cameraman

● The cameraman whether in the studio or on location frequently finds himself on the spot as to how an apparently impossible shot may be made but if it MUST be done be cheerfully and quickly goes to work to figure out the way Take for instance a scene in So You Won't Talk Columbia picture now shooting and featuring Joe E Brown A shot had to be made in a narrow archway under the stairs with insufficient room for a dolly or perambulator The camera could not be panned because at the finish the actor would be too close and as there was no other place to put him a dolly back was required The cameraman confiscated a table from one of the script girls using it to make the dolly shot. It wobbled a bit, so cleats were put on the sides of the castors and it became perfectly steady

● Lee Garmes is working on a picture in which the walls are of painted burlap and in keeping with the somber mood of the production very little light is used Most of the sets do not have overhead scaffolding and when light is required from overhead the few lights that are used are bracketed up high to the sides of the set There is one long corridor shot with no ceiling where a wide angle lens is used A small piece of grey board laid about three feet in front of the camera so blended with the grey walls that no one would have guessed it was not actually the ceiling

● Another instance was the photographing of the Lincoln Memorial in Washington by Al Siegler There is a watchman stationed there with a very efficient looking gun and he is a watchman who really watches If it looks as though a scratch might be made on anything he is right on the job We wanted to make a high angle shot showing the entrance cutting in the statue as it faces the east When the sun hits it from that angle it is beautiful and most impressive The floors are of highly polished marble and we were not permitted to enter with any large equipment such as parallels However, they did permit us to bring in several ladders Al mounted a two by twelve across the top of these, then nailed on a "high hat" The camera was put in place and the shot made from a height of about fifteen or eighteen feet The results were exactly what we wanted



By a weird paradox of Nature the tiniest horses known—some no larger than dogs—have been discovered in the mazes of the world's mightiest chasm: Grand Canyon. One is shown at right silhouetted against the hazy background of the Canyon while below the author, who is a member of Local 659, IATSE, shows how simple it is to lift a horse. These amazing animals are being exhibited at the San Francisco Golden Gate Exposition.

CANYON of LITTLE HORSES



By ERNEST W. RITTER

It is now several years since I met Jack Tooker naturalist outdoor man and big game hunter extraordinary of the Grand Canyon region for thirty years.

I was doing some shooting down there and one night while at the Bright Angel Hotel Tooker approached me and said he had a proposition. We sauntered outside and over to the rim of the canyon. The moon just had slid out from behind a cloud and there in the mysterious depths of the Grand Canyon the weird ghosts played. Many a night had I witnessed this sight as the bright moon faintly lighted the depths and weird shadows moved about.

For several days I had noticed that Tooker had something on his mind and as we sat there the spell of the canyon was too much even for him for then and there he told me his secret.

Old Smiley chief of the Supais had been one of the West's most colorful Indians. Before he died seventeen years ago at the reported age of 113 he had been for many years a friend of Jack Tooker. Long ago he had told Tooker this story the only white man ever to know it and Tooker promised never to reveal Old Smiley's secret as long as Smiley should live. He kept that promise.

Tooker was itching to film what he knew. I had gained his confidence and this night there on the moonlit Rim he told me the thrilling almost unbelievable story. yet I felt he was telling the truth. I pledged never to tell a living soul and now Tooker and I are the only white men who know the location of the "Canyon of Little Horses" where dwell the smallest horses in all the world. And here is a synopsis of Old Smiley's story.

When Smiley was just twenty the blood thirsty Apaches had stolen his lovely young bride. He had trailed them to the south to the White Mountains. After many days Smiley slipped into the Apache camp stole three horses grabbed his wife and started for the Canyon country. The whole Apache camp came to life and started in hot pursuit. After many days flight through snow piled forests Smiley with his exhausted wife reached the Rim where El Tovar now stands. Realizing he never could reach home on the Rim with the Apache horde so close in pursuit he decided to throw them off by going down into the Canyon on what is now Bright Angel Trail and maybe he could reach home on the Tonto Plateau at the bottom of the canyon. At the bottom of the trail are the Indian Gardens where a few friendly Hopi Indians lived. As Smiley's home was fifty miles to the west over rough untrailed country the Hopis persuaded him to remain a while.

Two weeks later his wife gave birth to a daughter and in another two weeks the little party was on the way west riding two mares and leading a gallant stallion. Some thirty miles out the weather became unsettled and a storm set in. The going was pretty rough. The horses went lame and

Smiley decided to leave them until Spring in one of the main tributaries to the main canyon.

When the snow had melted and the deer again returned to the Rim country Smiley went back for the horses but what had been the trail was now a sheer wall the result of a slide during the winter Smiley looked down on his hopeless trapped horses They have been trapped there until this day For 104 years they have been there where they have multiplied and because of inbreeding and lack of lime have become dwarfed

As we sat there on the Rim Tooker's story enthralled me I was somewhat in doubt and I asked When can we go?"

The very next day we were off Far to the west we let ourselves over a sheer cliff with ropes and entered the region of the midget horses We built a blind near a water hole under a cottonwood tree That evening they came single file tiny horses some no larger than dogs There were blacks pinto paints whites and then bringing up the rear was a little sorrel with flowing white mane and tail They got our wind and scampered away like rabbits

The next morning we saw little tracks, no larger than those of a fawn We trailed the herd right out on to a point straight above the swirling Colorado River a full half mile below We walked right up on two little fellows and when we tried to rope them they become so frightened that one of them jumped over the cliff and disappeared into the terrible drop below

A few days later we pulled ourselves out from the Canyon exhausted For different reasons that year and the next we failed to return to film the story but on April fourth of this year I arrived at the Canyon fully equipped and down we went into the land of purple shadows. When we entered it was snowing and it kept up for most of the eight days we were there

The third day out we jumped a herd of some twenty five horses led by a normal sized stallion and a black and white paint the most beautiful animal I had ever seen The herd ranged in sizes down to fifteen inches high

I secured some good shots in spite of the weather in fact the snow seemed to lend enchantment to the action

The next day we came upon a thirty inch dead mare killed and partly covered by a lion Her colt, unharmed was shivering at her side and almost dead from exposure Three days later we caught a thirty inch mare and a twenty inch stallion weighing forty-eight pounds and some eight years old

I secured some fine shots, among them scenes of the little horses jumping from crag to crag like hardened mountain sheep We thought we had many cornered, but they would scale the walls like goats and escape

After eight days of hardship wet to the skin, we returned to the Rim and pulled our horses out with block and tackle in nets We rested a whole week at the beautiful Tooker cabin home and booked the horses for the San Francisco Fair in a large concession on the Gay Way If you visit the Fair you will find the genial Mr Tooker with the tiny little nags if you look very closely maybe you'll find me among the rocks near the back drop

Almost a week after we brought out the horses Tooker and I again were out on the Rim after sunset There was no moon this night, the canyon below was a purplish black A gentle wind rustled through the trees I looked far to the west at a thousand places where no human foot had ever trod and possibly never will And as I looked down into that mighty chasm that had taken the Colorado River eighty million years to carve I beheld the most stupendous exhibition of the wonders of nature to be found anywhere on this earth

I have reveled in scenery in this and many other countries, but nowhere have I encountered anything comparable to the gigantic gorge with its thousands of canyons within the master canyon No mortal ever lived who could find language to describe or coin words to express its magnificent grandeur, no architect or sculptor, ancient or modern could possibly design or pattern its sublime and majestic structures and as the rays of the setting sun were reflected on its crimson walls it brought out a harmony of colors no Raphael or Michael Angelo could ever portray

As twilight approached that bewitching hour that bids a reluctant adieu to the sun and rolling back the curtains of night ushers in the stars, the poetry of any man's soul would be enriched As I listened the gentle wind whistled around the unnumbered crags and crannies, producing a grand symphony no Handen or Beethoven could put to music

The canyon was dark now pitch black and as I gazed there I wondered how many other secrets the canyon holds besides that of the little horses in the "Land of the Sky Blue Water" I have spent many years painting and photographing in and around the canyon and thought I was rather an authority on that region but since trailing Tooker around I have come to the conclusion that I have really don't know the canyon, perhaps another twenty years will make me better acquainted

BOOKS

"Aerial Photos, How to Make and Sell Them, by Claud J Dry The Aircraft Directory, Athens, Ohio $1 00

Reviewed by Ira B Hoke

● As a photographic operator and instructor in the United States Air Service during 1917 and 1918, I was extremely interested to review this small volume

The most famous of aerial photographs, according to author Dry was made April 18, 1906 over ruined San Francisco by George R. Lawrence It was purported to have brought more than $15 000 to this pioneer flying photographer

Dry brings his book down to date suddenly by citing a number of commercial uses to which the aerial photograph is adapted. Mapping recording geological formation timber surveys oil fields engineering projects irrigation waterways, industrial plants, are but a few of the fields in which this branch of photography is particularly useful

Several short chapters thoroughly cover the subject of necessary camera equipment Described are not only commercial cameras built especially for aerial work, but minute instructions for adapting well known makes of hand cameras for practical use from planes.

Author Dry did not write his book exclusively for the camera hobbyist, as five chapters on making aerial photography pay will testify

"Study your community," he writes, "bearing in mind that aerial photography doesn't limit you to a few miles but can take you into an area of two or three hundred miles that is still your community"

In such a far flung field numerous money making opportunities for the photographer who seriously adds aerial work to his profession are pointed out Where to sell pictures and prices to charge are not neglected in these chapters

There are also included chapters on technical details of filters, film and print processing sizes of prints most in demand, as well as miscellaneous information of interest. It is a valuable and instructive booklet for members of our craft who wish to take up aerial photography for profit or as a hobby

South Seas Travel Book

● "Brown Barriers" by Glenn R Kershner is now available at the public library This novel of the South Seas with an authentic travel background also contains charts, maps, a glossary of sea terms and South Sea languages. The reader may enjoy the book without moving from his chair for any additional references Orsatti Bros. have the exclusive handling for the studios.

COMPLETING THE PICTURE

DRAMATIC lighting and unusual camera angles are only partly responsible for the startling beauty of modern screen productions. It takes Eastman negative films to do full justice to the cameraman's wizardry — to really complete the picture. Eastman Kodak Company, Rochester, N. Y.

J. E. BRULATOUR, INC., *Distributors*

Fort Lee Chicago Hollywood

PLUS-X
for general studio use

SUPER-XX
when little light is available

BACKGROUND-X
for backgrounds and general exterior work

EASTMAN NEGATIVE FILMS



(Top) Paulette Goddard's press agent Steve Brooks, sneaked Theisen's second camera and grabbed this shot during the shooting of a story at Arrowhead Springs. Steve Hansen is holding a sixteen inch reflector used for highlighting by remote speedflash on dull days. The large reflector is used too for better light distribution and penetration over greater areas. (Below) You will remember having seen this cover on a recent issue of "Look." The photo made you believe she was on a sailboat. However cover of shot is a regular movie production in her backyard. Here is shown Hub Lens art editor and Dr. Curtis who made available a Color Scout for testing.

COVERING "look

(Editorial note: We asked Earl Theisen and Steve Hansen, technician who do the LOOK covers to tell of the fun, and—yes—their trials in color.)

● A couple of years ago when Vernon Pope, LOOK's editor said that we and all photographers must learn to shoot color it was about as alarming as if he'd suggested that we learn to make a batch of biscuits.

Strange technical terms that we'd heard and the long faces of many who had tried to do color presented a formidable front to the task of doing color. Actually however color photography is good fun, and not nearly so alarming.

One of the reasons for failure in color we found was trying to fit color technique into the familiar black and white formula. There is only one way to do color—that is, think in its terms.

The actual mechanics of getting a shot may easily be put to rule of thumb routine. Critical exposure so very necessary in color may be calculated if speedflash is used, or determined by exposure meter with other light. By operating under as much of a systematized routine as possible many pitfalls are avoided. Steve Hansen LOOK's technician and I try to anticipate and prepare for every possible problem that may arise on a color sitting.

In doing a cover we follow somewhat the routine of movie production. First we "cast" the cover by making tests in black and white using a guide or idea sketch designed by Herbert Lenz, LOOK's Art Editor. From black and whites the editorial board selects and revises, thus securing an exact photographic visualization of the idea. With that done the clothes are designed and the color scheme worked out.

For the actual shooting in color we usually prefer to use sunlight for highlight with speedflash for shadow filler. In fact, the current cover of Linda Darnell taking a moonlight canoe ride was done in daylight. Perhaps because I am braver than most, I attempted this night effect in broad sunlight. Linda was leaving the next day for location in Utah to film "Brigham Young" and there was no chance for another sitting until after a considerable delay.

Because the shot was made before we started using dye prints, the Kodak bromide medium was used. The moonlight effect was obtained by overshadowing the sunlight with speedflash. Using a chart which

" COVERS

By EARL THEISEN

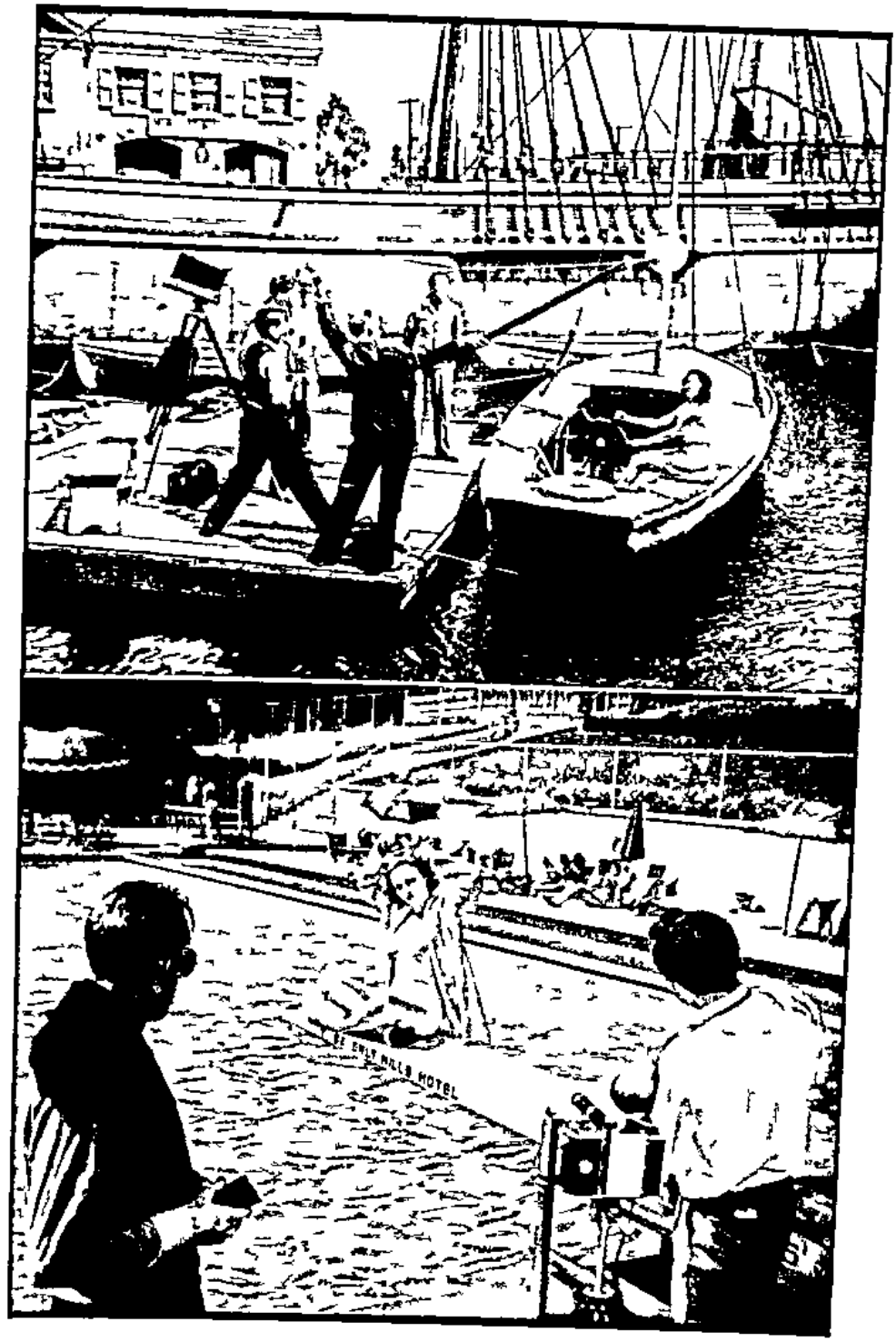
we had calculated by slide rule it was possible to ascertain just how close and how many globes were necessary to establish the moonlight effect on the background water and set The exposure was calculated for the foreground by speedflash overbalancing the daylight so as to hold it in underexposure low key Blue gelatin bags of proper color were used over the globes at the camera while straw-colored bags were used at the side in remote speedflash for highlight It is true, I am sorry to say the original Kodachrome as reproduced on the stands has lost much of its sparkle

In doing the covers where speedflash is only the shadow filler, the number of globes is usually two or three at fifty or a hundredth second If the sunlight is low in Weston rating (Weston Master Meter is used) the globes are moved back to proper distance so as not to flatten out the lighting too much

Because we prefer to shoot at a fast shutter speed to get more animation of the snap shot variety at times it is necessary to add a remote speedflash on the sunlight side to increase the total light and step up shutter speed Whenever possible we avoid shooting if the meter says the sunlight is too warm in color or if there is a high mist or fog which usually makes the light too blue

A calculated chart determines the exact number of globes required and at what distance they should be placed whether in sunlight or interiors The chart has been calculated by slide rule not by trial and error We predetermine from it that if two globes are required for a certain stop at ten feet one globe at seven feet will suffice for a critically proper exposure with the same stop The same formula indicates that four globes at fourteen feet are necessary The remote speedflash is held far enough to the side and back to eliminate considering it as part of the exposure It is also important to see that the remote does not cause reflections from the setting or background that will discolor our subject matter

With interiors where colored backgrounds are needed colored jellies over remote globes often give the desired color without the necessity of a lot of painting To avoid the reflection of yellow red or other color from the background to the foreground the background is first lighted with mazda to determine the angle of reflection and then mazda is replaced with speedflash On the side let me say that actually we don t do this globe changing



(Top) Shooting the cover of Linda Darnell that was used on a recent issue of "Look" The sun had a low Western rating so highlights were added by remote speed flash Kodachrome was used In the current cover on Linda Darnell, made later, moonlight effects were gained in sunlight by the same use of speedflash and remote control light By using a speedflash to overshadow the sunlight and exposing for the foreground, the night effect reproduced on the cover was obtained (Below) Shooting the Margie Dean cover for "Look" which appeared on the stands in July The picture was a dye print and the negatives were made with a synchronized Curtis Color Scout.

any more because experience has taught us which angles cause trouble

Of course we studiedly make all preparations in advance so as not to fatigue our subject or model The keynote of a LOOK sitting is to get it over with we have found that this does much to eliminate the starch stiff photo

The remote speedflash, when used both for highlight on the foreground as well as for lightening up the background is set off in a large reflector Proper distances of the remote in relation to the filler or exposure light at the camera is necessary to avoid losing the highlight color which happens if the highlights are too hot If the filler light is ten feet, the remote light should be about seven varying in distance of course with the effect desired and the number of globes used at the camera.

The relation hip between the remote for highlight and the fill light is maintained at about the same ratio whether speedflash sunlight or mazda light were used

The color processes are limited and can not accommodate a long contrast range if color is wanted in both highlight and shadow Kodachrome for example has a short contrast range which makes it necessary to have sufficient light from either speedflash or reflectors in the shadows so the range from highlight to shadow is not too great contrast This is designated as flat lighting if the range from highlight to shadow is not marked The short contrast range of Kodachrome by the way is what makes it so brilliant, while, at the same time making reproduction difficult

So as to lower this contrast to get better color and a shorter scale (in the interests of better reproduction) the highlight and shadow exposures are both read from our Weston Master If the sunlight has a "Weston" of say 800 we fill in the shadows until we get at the very lowest, a "Weston of 200 If a Weston" of 400 can be reached for the shadows against an 800 for the highlights the resulting Kodachrome will have brilliancy and at the same time reproduce or copy better The best way to achieve this balance is by speedflash using the speedflash for filler We know by chart what our speedflash exposure is, whether in sunlight or interior If it is merely filler light the globe is held far enough from the subject to get the desired balance in proportion to the sunlight. Since actually shadows are usually bluish or cold we use blue bags over the globes in sunlight to avoid a phoney color in the shadows. Bare globes give too warm a shadow Steve Hansen has developed a blue bag that is bluish green enough to give the desired shadow tones.

We try to talk our editors out of using yellow next to faces in the guide sketches from which our covers are made because almost invariably the yellow reflects onto the face, spoiling the skin coloration or making it too warm We avoid brown colors in clothes because this color re-

Exposure	4 ft.	6 ft.	9 ft	13ft.	18ft
1/2	12 5	10	6 3	5.0	3.5
1/5	18	13 5	8	6.6	4.5
1/10	22	16	13	9.0	5.6
1/25	28	23	13 5	12 5	8 0
1/2	11	8	5.0	4.5	3.0
1/5	16	11	8 0	6 3	4.5
1/10	20	13	9	7.7	5.5
1/25	30	19	13 5	11 0	7 7
1/2	8	6	4.5	3.0	2.3
1/5	11	8	6 3	4 5	3.0
1/10	13 5	10	7.7	5.5	4.0
1/25	19	13 5	11	7 7	5 6
1/2	5 6	4 5	3 0	2.3	—
1/5	8	6 3	4 5	3 0	2.3
1/10	10	7 7	5 6	4 0	2 8
1/25	13 5	11	7 7	5 6	4 0
1/2	4	2 8	2 8	—	—
1/5	5 6	4 0	2 8	2 0	—
1/10	6 7	5 0	3 5	2.3	—
1/25	10	6 8	4 5	3 0	2 3

The chart used by Theisen in connection with "Look" covers was compiled by slide rule for Special Press 40,000 Wabash globes The chart will give accurate exposures providing the shutter speed is correct With variations in shutter speeds it is possible that the chart will vary as much as one-quarter stop However if the shutter is correct at one point the chart will be correct Photographing in different amounts of reflection will vary the exposure in accordance with this reflection

quires about a full stop more exposure thus throwing off skin tones and other colors Sky blues and yellows require half to a full stop less exposure from what may be determined as the normal exposure for any particular scene Green requires more exposure and foliage green in the shadows is almost impossible to record. The sky is bluer if the sun is at your back Never expect to get color in hot highlights, or in highlights in contrasty lighting In a couple years many such "do s" and "don t s" are encountered and in the past I've blamed the film manufacturer for many things that later I found were the result of improper precaution on my part.

At present, in doing LOOK s covers, dye prints are preferred because they offer less problems in reproduction The single shot negatives are made with the Curtis Color Scout camera because it is light and flexible in operation giving chances for more action and a snap shot animation

Kodachrome however is still used for some cover shots and for the inside color despite the reproduction difficulties in that the printing processes do not have the same long scale of the transparency Visually a Kodachrome may be brilliant and full of delicate tonal range in both highlight and shadow In reproduction of it whether a photographic copy in a dye print or carbro or by printers ink, both the highlight detail and shadow block out enough to kill some of the original beauty In a Kodachrome the ratio of highlight to shadow may be as much as 200 to one the best that a glossy paper can accommodate is about 50 to one In other words, to accurately reproduce a transparency in its original true tone range would be like trying to put a four foot pole in a one-foot box

When it is necessary to use mazda the 3200 Kelvin globes are preferred over the regular photoflood, even though the photoflood is more actinic Rather than use the globes which are usually rated at 120 volts 3200 Kelvin special 110 volt globes were obtained from General Electric since most power lines carry 110 volts and this lowering of ten volts would tend to warm up the general tone of the color Glass cloth is used for diffusers, and no hot light is used

Of course shooting color is not simple because trouble is usually disguised Perhaps in a black and white an out-of focus background can be artistically part of the whole in color it is seldom so The essential difference in the two must be met in the attitude of the photographer himself

New Bell & Howell Camera

● Important camera news of the month is Bell & Howell's announcement of the new 16 mm. turret head Filmo "Auto Master" first multi lens magazine loader in the industry "Here," says B & H "is the easiest-to-operate camera in the world—offering instant use of three lenses, automatically positioned viewfinders, interchangeable film magazines, and freedom from sprocket threading"

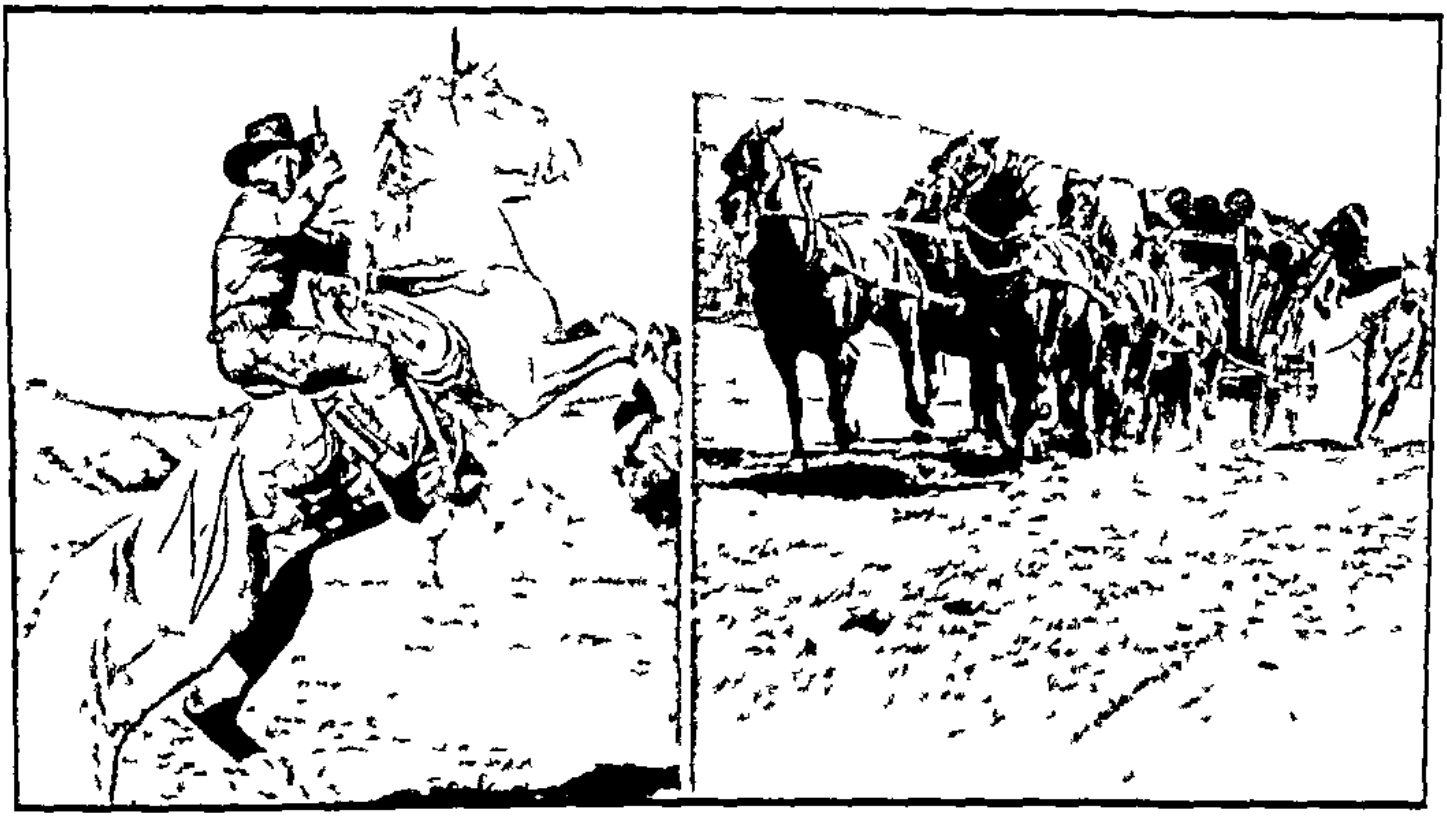
The "Auto Master" rounds out the line of single-lens Filmo "Auto Load" cameras announced a few weeks ago as successors to the well known Filmo 141 Important new features are

1 A rotating three-lens turret, upon which any three lenses may be mounted—wide angle speed or telephoto Any lens is instantly placed in photographing position simply by rotating the turret.

2 Automatically positioned viewfinders. Mounted directly on the turret beside each lens is the corresponding viewfinder objective As the camera lens is rotated to position the matching objective is automatically seated before the viewfinder offering a full-size image—no masking for telephotos This is the same new type positive viewfinder says Bell & Howell as announced for the Auto Load"—providing an image said to be 250 per cent more brilliant than in previous models

3 A new built in exposure calculator which is said to give at a glance the correct lens setting for both Kodachrome and black and white film Kodachrome figures are in red, those for monochrome in black

Additional features have been retained from the Filmo 141 The "Auto Master" operates at four speeds, 16 32 48 64 frames per second Equipped with the Taylor Hobson f2.7 lens and the viewfinder objective it is priced at $195



CAMERA ACTION

Thrills and spills — chases and chills are the principal ingredients for Westerners today, just as they were when the picture industry was in its infancy. Throw in a dash of gun play — a Redskin or two biting the dust — and you have a production that pleases the paying public as well as the boxoffice. These crisp action photos are by Eddie Jones, member of Local 659, IATSE, from the Universal serial 'Winners of the West.' Jones uses a 4"x5" and a Speed Graphic, which he says give sharper pictures and better *blow ups*.



TELEVISION

First Television Convention

INTEREST in television has been very much accelerated by the development of plans for the First National Television Convention which is scheduled to be held at the Hollywood Roosevelt Hotel August 22 to 24.

Those interested in cinematography see in the proposed convention an opportunity to secure up to date information on the use of the electronic camera employed in television studios and mobile pick up. A list of papers which has been released discloses a number bearing directly upon the problems which will be faced by the men who will ride a dolly in the studios or operate the cameras in the field. One of these papers "Studio Lighting" by T. H. Shepherd illuminating engineer with the Bureau of Power and Light City of Los Angeles will contain the result of intensive research by Mr. Shepherd on this subject. "Color Television" by William L. Prager well known in cinematographic circles for his original work in color photography also gives promise of containing interesting material.

Convention plans embrace trips to points of interest in and around Los Angeles including the Federal Radio Monitoring Station at San Pedro and tours of inspection to NBC and CBS radio stations.

Ladies attending the Convention will have an opportunity to see the art of make-up at Max Factor's International Beauty Salon and also take in under the supervision of Mrs. Ruth Williams social director of the Roosevelt Hotel sight seeing shops and points of interest.

An interesting exhibit of television radio and other equipment materials is planned to be set up at the hotel headquarters. Booths will be in charge of men competent to discuss photographic and television problems.

Social events will include a luncheon at which public officials, motion picture and radio executives and artists will be invited to extend greetings and a banquet with addresses by prominent speakers and the presentation of new national officers of the Institute for 1941. Also awards to distinguished personalities will be made. Miss Shirley Thomas the most televised artist in America known as "television queen" will be in charge of entertainment.

"Nowhere else in the world than in Hollywood could similar opportunities for a television convention be offered," president George H. Seward said. "Here will be the television production center in the industry as it is now for motion pictures and for national radio program activities. These allied industries will eventually contribute their technical skill and professional artistry to television. California's wealth of sunshine, its scenic beauty and numerous sports will furnish an unrivaled field for television mobile camera pick up.

"Those who attend this convention are the pioneers of a new industry. They will be men and women of initiative who will take time from other pursuits to be present. They visualize opportunities in this new entertainment and educational vehicle.

"An object of the Convention will be to gather together in one group engineers and others who are willing to lend their energies to the upbuilding of this facility for seeing at a distance, which has been the dream of scientists for the past century.

"The Television Engineers Institute is formed and the Convention held in the belief that there exists a real need for a national organization devoted exclusively to television. Specialization in organizations is as inevitable as in other matters."

● Owners of television and radio receivers are becoming somewhat jittery over their investment in radio receivers designed for present broadcasting standards. Uneasiness is caused by publicity concerning the new method for modulating the carrier waves emitted by broadcasting stations to produce variation in tone known as frequency modulation. This new method of transmitting broadcast programs, which is the invention of Major Edwin H. Armstrong of Columbia University, New York City, has in support of its claims of superiority the feature of noise-free staticless transmission. It also permits the installation of a larger number of broadcasting stations in a given area as compared with what is possible under present methods.

Some statistics as to the importance of any change in broadcasting methods are of interest. It is estimated that at present the public has invested three billion dollars in forty million receivers. Another seventy five billion dollars has gone into 826 commercial broadcasting stations. It is pointed out however that the proposed transition from present broadcasting methods to those employing frequency modulation will be gradual and will be the result of great research and experimental work requiring the services of hundreds of thousands of technicians. It may be the biggest boom that the radio industry has experienced in twenty years.

Proprietors of technical training institutions, teaching radio and television are pointing out to their prospective students these employment opportunities. One of the outstanding men in the field Herman A. DeVry, president of DeForest's Training Inc., and also president of the DeVry Corporation, manufacturers of motion picture sound equipment, points out that from such specialized technical schools must come many thousand technicians necessary to man this new industry of commercial television and the possible change-over in radio broadcasting to the frequency modulation system.

By Duster Evans

Television at the Fair

● New interest is being shown in television displays at the World's Fair in New York. RCA has planned the most comprehensive demonstration of television ever presented in the United States in its enlarged and revamped exhibit at the Fair grounds.

Other developments of RCA now being exhibited include the first public showing of a new high speed radio facsimile system, a working demonstration of international radio communications with foreign countries, an assembly line illustrating the skill and methods used to build modern radio sets, a model of the new electron microscope with which objects twenty times smaller than ever seen before can be studied and a beautiful music lounge where recorded music may be heard upon request.

A television suite incorporating ten separate rooms has been added to the building. Each room represents the American living room and includes a television receiver and seats for ten guests. Diversified television programs are broadcast.

The popular audience participation programs" which were given last year will be continued this season, but on a more elaborate scale.

● The Blow Company of New York is the first advertising agency to install fully equipped television studios and audition rooms for their clients.

Not only is the mechanical equipment complete, but the agency is developing a television creative department, complete with engineers, directors and writers.

Actual test programs will be prepared daily, with the idea in mind that televised programs should be able to stand alone either as ear entertainment or visual.

● A very impressive demonstration of television entertainment projected upon a screen 6½x8½ feet was given by RCA at a recent board meeting. Lowell Thomas acted as master of ceremonies at the demonstration and at various times added



Camera highlights of television activities show (Above left) Maxine Gray famous singing telestar who appears regularly on the Thomas S Lee shows at Hollywood's station W6XAO sole telecasting unit in the entire eleven states west of Kansas (Above right) Veteran actors as well as young beginners find a welcome spot on WCXAO programs which are seen and heard by Southern California "lookers" every night in the year except Sundays and holidays Shooting Lionel Belmore and Miranda Allen with the special television camera is industrious Bill Collins member of Local 659 IATSE whose members are making valuable contributions to the professional excellence of the experimental non-commercial productions presented over the local station (Mark Finley photo) The unretouched photo below shows how clearly images are televised Harry R Lubcke director of television for Thomas S Lee demonstrating the definitive powers of a standard set The image is a statuette flanked by two quart wine bottles (Allen Berg photo)



bulletins just received from the transoceanic channels The rest of the program consisted of three numbers by the Merry Macs solos by a child prodigy pianist and a short humorous skit

The apparatus will retail for around $1700 it is reported and will be sold to cafes hotels etc

RCA also expects to have the screen expanded by September to 9x6 feet which is said to be only a matter of grinding the lens and otherwise testing and readying the equipment

Approximately 100 television sets are being sold weekly in the New York area according to a survey conducted by *Radio Today* among radio dealers

for work that exacts the highest possible standard Cameramen demand the

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■

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AGENCIES

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Claud C. Carter Sydney Australia
D Nagase & Co Ltd Osaka Japan
Motion Picture Camera Supply Co New York City
Fazalbhoy Ltd Bombay India
H Nassbaum Cairo Egypt

● Establishing an American distance record for shore to ship television reception television images flashed from Station W2XBS atop the Empire State Building were picked up 234 land miles at sea aboard the liner President Roosevelt

Engineers who viewed the images from the liner reported the scenes were tuned in for a full hour without the fading or distortion usually experienced in long distance pick ups —*Gene Hodges*

Station Plans Advanced

● Marking a swift move toward erection by January 1 of the world's first all purpose television station a contract for paving the highway to the very top of the imposing site atop Mt. Lee has been signed by owner Thomas S Lee with the Griffith Company, local contractors

The agreement, according to Willet H Brown vice president and assistant general manager of the Lee radio and television enterprises, calls for a twenty foot asphaltic concrete artery and all work on this portion of the project is to be completed within thirty days

Meantime, a full complement of technical advisors accelerated their work in cooperation with Director of Television Harry R Lubcke and Don Lee executives in an effort to have final plans for W6XAO's new home in the hands of builders by this time

Eric Barclay constructor of many large Southland buildings has been named contractor to erect the television station Paul Jeffers will be the structural engineer while Leonard Goudy is civil engineer and general consultant

The television station atop Mount Lee will be entirely shielded in copper it was disclosed by Mr Lee 'This will prevent outgoing television energy or waves from feeding back into the sensitive television tubes and also eleminate interference from outside sources he said

Another feature of the building will be a large rotating beacon on the roof which will be visible almost within the entire telecasting radius of sixty miles

Foot Switch Feature

● The Photrix Foot Switch is a new item just added to the line of photographic equipment carried by Intercontinental Marketing Corporation New York City It is extremely convenient to use since the pedal is kept unusually low so that the foot may remain in normal position while operating the switch The switch will operate by pressing the pedal lightly at any point, thus keeping the foot relaxed It has a non slip base and may also be easily fastened to the floor It is equipped with an 8 foot heavy duty rubberized cord and permits a maximum load of 1500 watts. Two receptacles are provided the one controlled by the Foot Switch the other non controlled for use with the pilot light darkroom fixtures, etc It is priced at $5.50

"Extra Margin of Quality"

UNDER NORMAL PRODUCTION CONDITIONS:

Agfa Supreme

Noted for a remarkably fine grain and excellent color balance and gradation combined with great speed!

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NEWS OF THE MONTH

G-E Photo Lamp Folder

● Essential data pertaining to all G E Mazda lamps useful in the realm of photography have been compiled in a new free folder announced by General Electric s Lamp Department

The folder P 093' affords photographers and dealers a panoramic view of all G-E Mazda photolamps and a complete line of other Mazda lamps equally as important to photography as they are to other lighting fields

Seventy six illustrations are used to portray the nearly one hundred G E Mazda lamps, their characteristics and recommended uses So readers may promptly find their answer to any specific photographic lighting need, the folder s first page carries a contents table which locates each of the thirteen main subjects covered in the brochure Included in the folder are the following

Exposure guides for G E Mazda photoflash and photolamps for use with all types of cameras relationships of the five main variables, namely film speed, lamp size, distance from lamp to subject shutter speeds, and diaphragm opening

Tungsten film speeds based on official Weston film speed ratings for various makes of rolls and packs, for portrait and commercial needs, for press, process movie Kodachrome and Dufay color Characteristics of the present eight G-E Mazda photoflash lamps with time-light curves of each Helpful hints on how to get better daytime shots through use of flash photography and greater depth in pictures taken by artificial light alone A spectral energy graph showing distribution curves of movie-flood and studio-flood light in terms of degrees Kelvin

Pithy information on colorflash exposure fluorescent projection and photo-enlarging lamp types Color Photography ("CP") lamps ranging from 2000-watts to 10 000-watts exciter and dark room lamps Also given in the case of each G-E Mazda lamp described is its list price as of June 1 1940 The prices therefore are the new "lows" established by the sweeping price reductions announced by the Lamp Department on May 20 and 21 and affecting list values of many of the lamps listed in the folder For example list price given for the G-E mighty midget Mazda photoflash is 13 cents instead of its recent list price of 20 cents.

The new folder is being made available through G-E photolamp dealers and the Lamp Department of General Electric at Nela Park, Cleveland.

History Repeats, Pictorially

● It happened on the set of 'Brigham Young," which 20th Century Fox was filming high in the mountains around Big Bear, California

After Frank Powolny had taken a picture of Tyrone Power leaning against a covered wagon, he took a photograph from his pocket and handed it to Ty

The star's eyes welled up with tears

The picture was that of his father, Tyrone Power, Sr., in the same pose, which Powolny, who is a member of Local 659, IATSE, had taken on the set of "The Big Trail"

The date on the back was May 9, 1930—10 years to the very day!

MGM Develops New Crane

● The "Ro-crane" used at the MGM studios for the first time during filming of "New Moon," Jeanette MacDonald and Nelson Eddy co-starring film, has proven so successful that John Arnold, head of the MGM camera department, who invented the device, has arranged for the studio to place bids for the making of six more.

Requests for the plans from other studios have indicated that the device will be widely adopted One request came from a studio in India.

The Ro-crane is a new form of movable camera boom which is half the weight of old time booms, with four times the flexibility

Big Montage for "Boom Town"

● John Hoffman shot more than 40 000 feet of special film to be used for the most elaborate montage effects in the past year at MGM for dramatic lapse of time and action sequences in "Boom Town," all-star film with Clark Gable Spencer Tracy Claudette Colbert and Hedy Lamarr with Jack Conway directing

Candid Victim Gets Revenge

● Carole Lombard enlivens life for herself and others in cast and crew of RKO Radio's "The Knew What They Wanted" by playing practical jokes on all and sundry

She likes to take candid camera shots and for the purpose has rigged a $2 box camera with flash bulb attachment. Results, incidentally, are claimed to be excellent

When she ran out of bulbs one day, she asked a prop man to replenish her stock He was one of those whom she had victimized in the past He got his revenge by filling her dressing room with boxes of flash bulbs—all used

Fast Photography Short Subject

● The Stroboscope, newest invention in speed photography, which permits action shots to be 'stopped cold' at shutter speeds up to one hundred thousandth of a second, will be the feature of the first Pete Smith short subject of the 1940-'41 MGM program

Prof Harold E Edgerton of Massachusetts Institute of Technology, came to the studio with an assistant to set up the instrument, known for its "Speedray" pictures recently published in newspapers throughout the nation

This short subject is planned as the outstanding novelty of the year, since the super-super speed of the Stroboscope makes it possible to disclose fast action never previously witnessed

For example, machine gun bullets will be pictured as they are fired between the synchronized blades of a revolving airplane propellor

Dizzy Menu at Disney's

● When Walt Disney moved into his new streamlined studio, a startling menu greeted diners in the studio commissary Items

Snow White Special (chicken salad)

Minnie's Delight (bubbling melted cheese, poached egg, bacon, Melba toast.

Stromboli Sandwich (roast beef)

Monstro's Morsel (fish plate fried oysters, shrimp, sole)

Pinnocchio Delight (strawberry sundae)

Jiminy Cricket Sideline (salted peanuts)

Low-Priced Speedex Jr. Model

● A new, low priced model of the recently announced Speedex Camera is now available for amateur photographers desiring a folding camera with the construction features of the Speedex but with simpler lens and shutter equipment Known as the Speedex Junior, the new Agfa model employs the identical design, styling and construction used on the more advanced Speedex, and so offers all the picture-taking convenience brought by the body shutter release, centrally located optical eye-level finder, rapid opening precision movement of front platform, and hinged back with safety latch

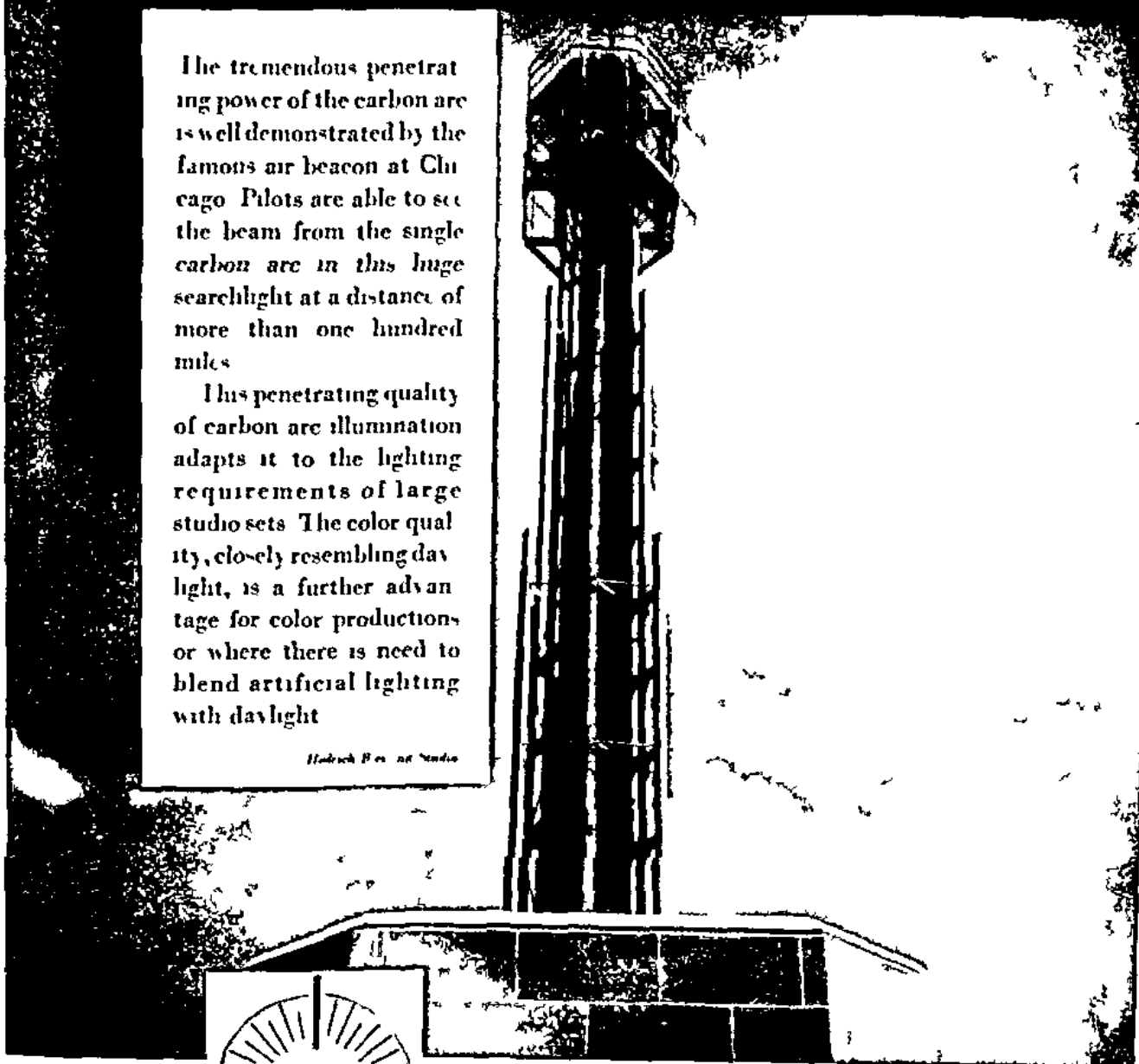
The Speedex Junior is fitted with a fixed focus four aperture, double lens of rectilinear correction and with a shutter giving instantaneous and time exposures Loading with inexpensive 82 size roll film, the Speedex Junior takes twelve pictures in 2¼x2¼ inch size It is entirely made in U.S.A and is obtainable through photographic dealers at $11 00

PENETRATION

The tremendous penetrating power of the carbon arc is well demonstrated by the famous air beacon at Chicago. Pilots are able to see the beam from the single *carbon arc in this huge* searchlight at a distance of more than one hundred miles.

This penetrating quality of carbon arc illumination adapts it to the lighting requirements of large studio sets. The color quality, closely resembling daylight, is a further advantage for color productions or where there is need to blend artificial lighting with daylight.

Hedrich Blessing Studio



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TRADEWINDS

Filmo 8 Projector Lamp

● Of special interest to owners of the Filmo 8 Projector is the 100 watt, 10 hour lamp just announced by Bell & Howell for their 8 mm equipment This new lamp is said to produce 30 per cent more light by actual test, than the standard 100-watt 25 hour lamp and 20 per cent greater illumination than the regular 500-watt lamp B&H claims that the new lamp generates no more heat than the standard 100 watt unit

This combination of extreme brilliance and moderate lamp temperature says B&H renders the new lamp ideal for projecting 8 mm Kodachrome Since color film is denser than black and white requiring more light to carry a satisfactory image to the screen it is obvious that greater illumination means a better picture

Bell & Howell believes that the reduction in minimum lamp life expectancy is far outweighed in importance by the increased illumination It is claimed that all films stand out more brilliantly on the screen that larger screens may now be used with 8mm film and that Kodachrome projection especially is vastly improved Furthermore the new lamp at only $1 25 costs less than the standard 100-watt unit did prior to June 1

B&H Lamp Prices Drop

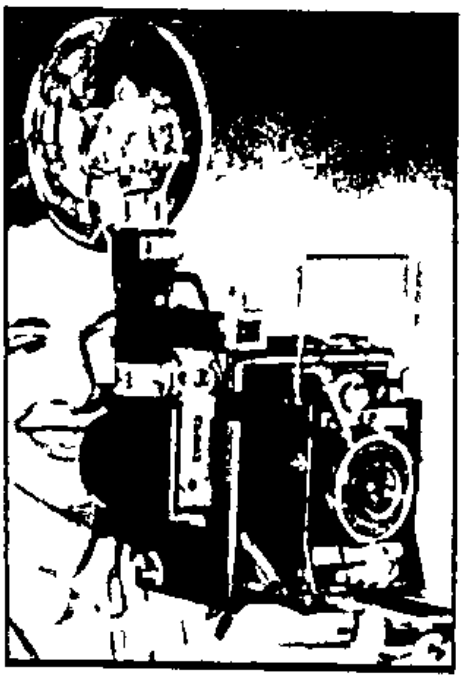
● New reductions in all lamp prices are announced by Bell & Howell with special attention directed to the fact that the 750-watt 10-hour lamp is now priced the same as the 25 hour lamp New prices follow

300 watt 100 to 125 volt	$3 25
400 watt 25 hour 100 to 130 volt	4.25
400 watt 10 hour 100 to 130 volt	1 25
500-watt 25 hour 100 to 130 volt	1 50
750-watt 25 hour 100 to 130 volt	1 85
750 watt 10 hour 100 to 130 volt	1 65

Tri-color Filters for Negatives

● Color minded photographers will be interested in the announcement of a new tri color filter set for making color separation negatives It is an addition to the already complete line of Solar accessories

The set includes three Wratten gelatine filters in the standard colors of red, blue and green for color separation work They come in Solar metal mounts and attach in place of the regular ruby filter fitting all models of the Solar Enlarger with lens board front A touch of the finger changes from one filter to the other They are priced at $4 50 a set For further information write BURKE & JAMES Inc 223 W Madison St Chicago Illinois



Speed Flash Contest

● Four years ago Kalart conducted its first Speed Flash Contest offering prizes for the best pictures taken with speed flash equipment Each year since then Kalart has continued these Speed Flash Contests with interest and enthusiasm increasing

This year's contest—the fourth annual—is even wider in scope in number and value of prizes Kalart is offering more than $500 in merchandise—in a total of 35 grand prizes These prizes include an Anniversary Speed Graphic (1st Grand Prize) —a Simmon Brothers Super Omega B Enlarger—a Solar Enlarger—a Federal Enlarger—a Kalart Lens Coupled Range Finder and many other valuable prizes

Entrants may send in any number of prints mounted or unmounted All entries must be photographs taken with a Kalart Speed Flash Both outdoor (Synchro Sun light) and indoor pictures are acceptable

In addition to the 35 Grand Prizes The Kalart Company each month will award a case of Wabash Flash bulbs and a new Kalart Concentrating Reflector for the best photograph received during each of the following months August, September October and November All entries received up to and including the last day of these months are eligible for the monthly prizes Speed Flash photos winning monthly prizes will also be eligible for Grand Prizes

Entry Blanks for the contest are available at Kalart dealers or may be procured directly from The Kalart Company The contest closes December 31 1940

5"x7" View Camera with 1"x5" Back

● In recognition of the demand for a professional to employ 1"x5" sheet films a special model of the 5"x7" Agfa Universal View Camera is now available supplied with a 1"x5" back or, at the option of the purchaser with both the regular 5"x7" back and a 1"x5" reducing back

This equipment brings to the critical worker the full versatility and flexibility of the regular 5"x7" model adapted to take more economical and conveniently smaller film size Ideal for both pictorial and professional applications this new outfit includes the following mechanical features

1. Focal extension of 20 inches without use of detachable parts
2. 5¼ inch square lens board
3. Tilting front with both rising and sliding adjustments
4. Swinging back of wide adjustment.
5. Construction of cherry and basswood with brass fittings and fine leather bellows
6. Back of camera permits use of a sliding groundglass attachment if split 5"x7" negatives are desired

Made by Agfa Ansco in Binghamton New York this Universal View Camera is available through photographic dealers at a list price of $72. Supplied with both size backs the camera sells at $86.

Leitz Shoulder Grip

● A major nuisance and often a cause of expensive breakage to photographers is the tendency of the shoulder strap of the camera or carrying case to slip from the shoulder of the wearer The difficulty can be avoided by wearing the strap cross-shoulder but this is usually inconvenient especially where the use of a rapidly operating miniature camera in an eveready case is concerned

The shoulder strap problem has recently been solved by E Leitz Inc with the introduction of the Leitz Shoulder Grip This device is a flat, elliptically shaped piece of material with a "toothed rubber under surface and with two pairs of transverse slits permitting the shoulder strap to be inserted into it easily and firmly When properly assembled the Leitz Shoulder Grip becomes in effect, a broad surfaced non-skid "contact" segment of the strap It keeps the strap on the shoulder no matter how heavy the load carried and is suitable for all types of carrying cases Price is 75 cents

"Tray-Clip" Thermometer

● The new inexpensive Agfa "Tray Clip" Thermometer is a darkroom accessory for every photographer who develops in trays or small open tanks. Furnished on a stainless steel support with a clever bend at the top this new thermometer has been designed with the realization that to be effective and useful a thermometer must be in the developing solution, conveniently placed but not in the way, throughout development.

The new "Tray Clip" Thermometer answers these requirements, since with its exclusive clip on feature it can be attached snugly to one side of the tray or to one end of a small, open developing tank, where it can be quickly seen without interfering with the handling of films during development. High visibility is assured by the use of large numbers and degree marks on the scale and by prism type construction of the glass column to magnify the width of the fluid column. The thermometer fluid is dense black in color easily visible under all types of safelight illumination. Protection is afforded the thermometer bulb by the lower part of the stainless steel support which curves up in front of the glass bulb.

Entirely made in U.S.A., the new Agfa "Tray Clip" Thermometer can be obtained through regular photographic dealers at a list price of 15 cents each.

Simplified Dual Projection

● With the new Victor Amplifier regular theater continuity is now possible for continuous shows without any breaks for changing reels.

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Public address equipment and a record player can also be used at the same time to supplement the sound projectors. Complete information may be obtained by writing to the Victor Animatograph Corporation, Davenport, Iowa.

Midget Bulb Adapter

● A special short adapter with built in ejector for the new bayonet base bulbs (Mazda No. 5 and Wabash Press 25) is announced by the Kalart Company. This short adapter automatically centers the midget bulbs for most synchronizers. It is especially recommended for cameras with built in synchronizers such as Agfa Shur Flash, etc.

Slight pressure on built in ejector makes it eject the bulb preventing burnt fingers and speeding up picture taking. The price of the short adapter is 50 cents complete.

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New Folding Cameras by Agfa

● A new series of Agfa folding cameras has just been announced by Agfa Ansco. Presented in two lines, the Viking and Readyset Special, these compact and streamlined new cameras offer the amateur photographer a choice of six models to match individual preference in picture size, price and picture taking range.

The new Agfa Viking cameras have an exterior trim of polished chromium and black, grained, waterproof material over a sturdy steel frame. Standard equipment includes built-in body shutter release, optical eye level and reflecting waist-level finders, hinged back and easy loading *spool carriers, smooth acting self-ejecting* front, dull chrome face plate with clearly etched markings, recessed tripod sockets and covered port in front platform for access to cable release socket.

The Viking is equipped with a fully-corrected *anastigmat lens in two models, f6.3* and f7.7. Both models focus from 5 feet to infinity and are fitted with a precision shutter giving speeds of 1/25, 1/50 and 1/100 *second Bulb and Time exposures*. Both PB20 and PD16 sizes are available in each of the Viking models permitting a choice between the popular picture sizes $2\frac{1}{4}$x$3\frac{1}{4}$ *and* $2\frac{1}{4}$x$4\frac{1}{4}$.

*The new Readyset Special cameras in*corporate the same basic design used for the Viking models, but have been built with emphasis on extreme operating simplicity—a feature for travelers and especially beginners.

These new Agfa cameras are entirely made in U. S. A. and are available at regular photographic dealers at prices ranging from $8.95 to $18.75.

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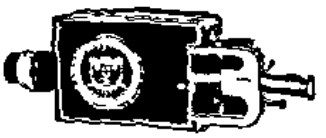
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Range Finder Use Extended

● The adjustable Model "F" Synchronized (lens-coupled) Range Finder featured exclusively on the Speed Graphic cameras is now available for other film pack and plate cameras according to an announcement by the Kalart Company.

This precision Range Finder which assures sharp pictures and permits rapid automatic focusing is adjustable for all lenses *from 10.5 cm to 30 cm telephoto* and will focus sharply at all distances from $3\frac{1}{2}$ feet to infinity.

The price of the Model "F" Range Finder remains the same, $24. The installation charge is $3.50. For the present the installations will be made only at the Kalart factory.

Following is the list of film pack and *plate cameras to which the* Model "F" Lens Coupled Range Finder can now be fitted:

9x12 cm. Avus, Ideal, Ihagee Maximar, Recomar, Welta and Linhoff.

6x9 cm. Bee Bee, Ihagee, Maximar, Recomar and Linhoff.

10x15 cm. Bergheil, Linhoff.

Snyder on Detroit Assignment

● William Snyder, first cameraman with Wilding Productions, has gone to Detroit *to photograph in Technicolor for* the Wilding Company. Snyder, who is a member of Local 659, IATSE, is a cameraman trained in the technique of Hollywood where he has been working in pictures for *over fifteen years. During that time* he has also been associated with Metro Goldwyn Mayer, Warner Bros. and United Artists. His brother, Eddie Snyder, is a first cameraman at Fox Studios but strangely enough *the brothers have never worked on the same production nor have they ever* been employed on the same lot.

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PATENTS

By ROBERT W. TULWIDER
Patent Attorney, Los Angeles

No 2,202,354—Apparatus for Photography in Relief With or Without Color *Anne Henri Jacques de Lassus St Genies* Versailles, France Appln Nov 4, 1938 In France April 14, 1934 4 claims

An apparatus for taking pictures in relief on lenticular film

No 2 202 355—Method and Apparatus for Copying Lenticular Films *Anne Henri Jacques de Lassus St Genies*, Versailles, France Appln Nov 25, 1938 In France Nov 5, 1936 6 claims

A method of optically reproducing an original film having cylindrical lenticulations, on a copy film having like lenticulations

No 2,202,737 — Photographic Filter. *Adolf H Kampfer* and *Albert Schattmann*, Charlottenburg, Berlin, Germany, said Schattmann assignor to said Kampfer Original appln Oct 7, 1937 Divided and this appln Mar 7, 1939 In Germany Oct 14, 1936 1 claim

A photographic filter of the same size as the standard motion picture frame having a series of graduated density filters separated by transparent cross bars

No 2 202 939—Portable Light Meter. *Sidney Lipser*, assignor to Technicolor Motion Picture Corp Appln June 9, 1939 2 claims

A light meter having rotable photo cell designed so that incident and reflected light may be measured without moving the instrument

No 2,203,209—Exposure Meter. *Edward F Weston*, assignor to Weston Electrical Instrument Corp Appln Jan 24, 1939 8 claims

An exposure meter using a photo cell and having a computing strip visible on the face of the meter which is movable to adjust for light value and emulsion speed

No 2,203,437—Apparatus for Projecting Cinematographic Images Carried on Disks *Rudolf Levy*, Berlin Halensee, Germany Appln Sept 22, 1936 In Germany May 17, 1932 4 claims

A device for projecting motion picture images spirally arranged on a disc, and having a condenser to discharge a luminous tube for a light source

No 2,203 651—Color Process and Camera Therefor John G Capstaff, assignor to Eastman Kodak Co Appln July 2, 1938 2 claims

A camera for use with lenticular film and having a color screen provided with lenticulations parallel to the lenticulations of the film, and moved perpendicular to the axes of the lenticulations for a distance of at least one lenticulation during each exposure

No 2 203 652 — Color Correction *G Ehrenfried*, assignor to Eastman Kodak Co Appln Jan 6, 1939 5 claims

A method of making a color corrected photograph from a colored transparency by binding an unexposed print out emulsion with the transparency and exposing it to a suitably colored light to form a corrective color filter

No 2,203 653—Integral Mask for Color Film *Ralph M Evans*, assignor to Eastman Kodak Co Appln April 27, 1937 3 claims

A multi emulsion color film having substantially pure dye images and at least one metallic gold negative image inert to silver solvents and dense enough to act as a correcting mask

No 2,203 655—Photographic Apparatus *Aloysius E Lechleitner* and *Laurence R Martin*, assignors to Eastman Kodak Co Appln Nov 8, 1938 11 claims

A device for photographic apparatus designed to thread the film from the sprocket to the gate, and to form a loop in the film

No 2,203,656—Color Correction Process *David L MacAdam* and *Cyril J Staud*, assignors to Eastman Kodak Co Original appln Apr 10, 1937 Divided and this Appln Aug 11,1939 4 claims

A method of producing a corrected color component image by forming on a "toe emulsion" a negative of one primary color component, forming a positive of another primary color component on ordinary emulsion, superposing the images, and printing both onto a "toe emulsion"

No 2,203 657—Curtain Shutter Joseph *Mihalyi* assignor to Eastman Kodak Co Appln June 7, 1938 22 claims

A focal plane shutter having separate curtains and a spring for each curtain, and a clutch consisting of a pawl carried on one curtain roller, and a ratchet connected to the other curtain roller to provide a split between the curtains

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No 2,203 658—Lens Shifting and Tilting Mechanism *Alvin E Schubert* assignor to Eastman Kodak Co Appln Mar 9 1938 20 claims

A projector having a lamp house slidably mounted on a base and a disc having a series of projection lenses of different focal length mounted on it the disc being movable toward and away from the film gate

No 2 203 687 — Apparatus Employing Polarized Light for the Production of Stereoscopic Images *Edwin H Land* and *Joseph Mahler*, assignors to Polaroid Corp Delaware Appln May 11 1938 11 claims

A device for producing stereoscopic pictures by means of polarized light and having overlying surfaces polarizing light different amounts

No 2 203 767 — Antihalation Photographic Element *Walter D Baldsiefen*, assignor to Du Pont Film Mfg Corp Appln Jan 25 1938 10 claims

A film having an emulsion on one side and a layer of water soluble vinyl alcohol polymer and an antihalation dye on the other side

No 2 203 768 — Antihalation Photographic Element *Walter D Baldsiefen* assignor to Du Pont Film Mfg Corp Appln Jan 25 1938 10 claims

A film having an emulsion on one side of the support and a water soluble carbohydrate glycollate and an antihalation dye on the other side

No 2 203 879 — Sound Film Printer *Lawrence T Sachtleben* assignor to Radio Corp of America Appln July 31 1937 3 claims

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No 2 201 071—Photographic Printing *John Eggert* and *Gerd Heymer*, assignors to General Aniline & Film Corp Appln May 11 1936 In Germany May 11 1935 6 claims

A process of producing colored prints on a multilayer film which comprises printing all partial pictures made from an object on a screen film and printing the partial color pictures from the screen film on the multilayer film

No 2 201 864—Shutter for Motion Picture Projectors *Ernest H Michaelsen* Mass Appln Nov 26 1938 9 claims

A shutter for motion picture projectors having two members rotating about axes on opposite sides of the film and acting to cut off light progressively from each side

No 2 201 917—Film Apparatus *Albert W Tondreau* assignor to Warner Bros Pictures Inc Appln Feb 12 1938 7 claims

A film drying apparatus having a horizontal spool head spaced between two vertical wall sections and supporting film in loops with means to direct film drying fluid through the compartment

No 2 203 179 — Photographic Filter Magazine *Harold F Schultz*, Niagara Falls N Y Appln Feb 23 1938 5 claims

A filter magazine having a series of filters mounted on a disc which may be rotated to bring different filters in front of the lens

No 2 203,510—Photographic Printing Machine *Charles F Phillmore* assignor to The Bell & Howell Co Appln Nov 1, 1937 13 claims

A contact printer for motion picture film in which printing is done on an accurate surface and the curvature of one of the strips may be varied

No 2,203 755 — Color Photography *Arpad von Biehler Germany*, assignor to General Aniline & Film Corp, N Y Appln Nov 22 1935 In Germany Nov 23, 1934 2 claims

A method of printing onto a multi-emulsion color film by exposing one layer to a negative and the other two layers to positives and then developing and coloring the film

Q. and A. box

THE QUESTION

● The following question was received last month from an International Photographer reader Arrangements have been made whereby such requests for photographic information will be answered by outstanding authorities in the motion picture industry International Photographer is published in Hollywood as the official magazine of the artists responsible for motion and still photography and who are members of Local 659 IATSE

Other readers desiring professional information are invited to write to the editors

Sirs

I am wondering if you would be kind enough to describe how a dissolving shutter is built as I would like to see if one can be built in my 8 mm movie camera by myself By a dissolving shutter I refer to the type used for fading in Also can you describe for me the best way to fashion a clutch so that the spring motor may be disengaged during rewinding of the film?

Many thanks for your anticipated compliance with my requests and further thanks for the many pleasant hours your magazine has given me

—*Herbert L Kerr*

763 W LaClede Ave, Youngstown O

THE ANSWER

● Unless you happen to be one of those magicians who can build a model ship inside a bottle I imagine the best thing to do would be to forget about building a dissolving shutter in your 8 mm camera The first thing that would whip you I believe would be room. The principle upon which a dissolving shutter works is to force one half of a double shutter to gradually gain upon the other half until together they form a solid shutter

Since both halves of the shutters must run at all times it is almost imperative that they both be mounted on the same shaft which means that in order that they may be individually controlled there must be a shaft within a shaft Picture a 180° shutter mounted on a half inch shaft thru the center of which runs a quarter inch hole The other 180° shutter would be mounted on a quarter inch shaft which would use the inside of the half inch shaft for a bearing Actually the shutter would not be 180° and 180° They would be whatever the maximum opening of your present shutter happens to be with the second shutter overlapping as much as easily possible 180° would be the absolute maximum Incidentally the shutters should be counter balanced

The next step would be to cut a helical slot in the outside shaft corresponding in

degrees to that of the shutter opening or a little more The inside shaft should then be provided with a straight slot the same length as the helical slot on the outside shaft Now if a free running pin passed thru both slots is provided with means by which it can be made to travel up or down the length or any portion of the length of the slots it will have the effect of forcing one shaft to change its relation to the other to a degree corresponding to the travel of the pin in the helix slot

This is the simplest way I can think of which the exception of going out and buying one of those little gadgets that are sold as attachments for 8 mm cameras A good enough way of fading out is to gradually close the diaphram of your lens provided it is capable of closing

As for the clutch the simplest form I know of is a pin clutch or perhaps a sliding coupling The pin clutch consists of two discs riding against each other The one is connected with the source of power the other to the driven shaft Until such time as a pin is inserted in holes provided opposite each other in the two discs there is actually no connection between the driver and the driven A sliding coupling would consist of a coupling pinned to the driving shaft thru an elongated slot of sufficient length to permit it to slide over the end of the driven shaft where an open slot in the end of the coupling would slide over a stationary pin in the driven shaft Means should of course be provided to lock the coupling in whatever position you wished it to remain

—W I Draper

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Industry History and Statistics

● Motion pictures were first developed in 1893 by the world famous inventor Thomas A Edison in a cylinder like that of an old Edison phonograph About the same year George Eastman invented a film for a kodak which he called roller photography Edison purchased the first strip of film developed by Eastman which met and fitted Edison's product and thus the motion picture had come into being Out of this union was to come the new and great motion picture which has since developed into the world's greatest single source of amusement

The first peep shows were opened in New York City on April 14 1894 The public being attracted to this new form of amusement demanded a screen machine, a device which would free the motion picture from the peep show In 1896 Edison brought out a commercial projector called the Vitascope, developed by Thomas Armat and on April 23 1896 the first public showing of motion pictures was given in a theatre and was widely acclaimed Men women and children went to see the "pictures that moved Empty stores and holes in the wall of every description soon became alive with moving pictures Interest was aroused that soon spread to the smallest hamlets, encircled the globe and enlisted more enthusiasts than any other medium of entertainment the world had ever known

In the beginning motion pictures were shown as an adjunct to vaudeville but on April 2 1902 The Electric Theatre devoted entirely to motion pictures opened its doors on South Main Street in Los Angeles In less than 40 years this form of entertainment has expanded to 17 003 motion picture houses which are now in operation and during the year 1929 reached a peek of 20 000 houses

For 30 years motion pictures were silent and the stories were conveyed to movie patrons through the medium of printed captions, pantomime and action On April 6, 1926 the silent movie was given a voice and the first talking and sound pictures in an improved form were presented to a distinguished audience by Warner Brothers at their own theatre at Broadway and 52nd Street New York City Thus, new life and interest were immediately created and box office receipts rose to new high levels

At the outset there was a wide variance of opinion as to the future of sound Many men in the industry were frankly skeptical as to its utility This opinion was probably due to the early failures of Lauste Edison and others but science triumphed—and together with an unsual degree of public response—another chapter of motion picture achievement was permanently written

Today the motion picture industry in terms of capital invested is considered as one of the leading industries in the United States and it is said that 2 billion dollars is a conservative estimate of its financial worth It has had great influence upon the public and has been responsible to a great degree in stimulating the sale of American merchandise throughout the world

One hundred firms are engaged in the production of motion pictures in the United States and produce an average of 500 feature films and approximately 800 short subjects annually Production cost is estimated at $165 000 000 Ninety five per cent of the motion pictures produced are made in Hollywood California

Introducing Mrs. Cortez

Last month INTERNATIONAL PHOTOGRAPHER ran a candid camera shot of Hal Mohr president of Local 659 IATSE with Mrs Mohr and Stanley Cortez and a young lady whose name was not given to us by the photographer The group was photographed at Ciro's enjoying a night out We have since been advised that Cortez's attractice dinner partner is also his life partner We are happy to acknowledge the introduction to Mrs Cortez and to properly identify her for our readers

—Editor's Note

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INTERNATIONAL photographer

Vol. XII September, 1940 No. 8

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On the Cover

Frank Lloyd, director, is shown in a typical action scene during the filming of "The Howards of Virginia," working close to the camera and directing the movements of the large cast by means of a microphone This interesting angle view was taken by Bob Coburn, member of Local 659 IATSE See pages 11 to 15 for other examples of Coburn's photographic skill

Editor, HERBERT ALLER

Art Editor, JOHN CORYDON HILL, *Business Manager*, HELEN BOYCE

Contributing Editors LEWIS W PHYSIOC, FRED WESTERBERG, D K ALLISON, GEORGE HURRELL, J N A HAWKINS, PAUL R CRAMER WILLIAM COMYNS, G M HAINES ROMAN FREULICH, ERNEST BACHRACH, ALVIN WYCKOFF, WILLIAM V DRAPER

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BROWN CALDWELL



"Give a man a horse he can ride" as the song has it and you give a photographer a subject of never ending interest. Here is all-letic Johnnie Mack Brown on his beautiful white steed ready to go places after the camera man had done his stuff. Photo by Ed Jones, member of Local 659, IATSE.

movie business is a cinch

That is what most of the public thinks, but life is no bed of roses for moving picture people, as this intimate account of a typical day on the "Tug Boat Annie Sails Again" set with Marjorie Rambeau and company reveals

As Seen by Fred R Morgan's Still Camera

WHEN Warner Bros. chief of camera department genial Mike McGreal signed me aboard the good ship "Tug Boat Annie Sails Again I was tickled pink *What* more can a photographer ask than old broken down waterfront buildings dirty, weather beaten docks chugging puffing old tug boats rough tough rowdy sea faring men and ships that go down to sea?

Headed by "Skipper" Lew Seiler with 'First Mate Russ Saunders for the directorial end and Arthur Edeson—that little giant of lens art—as captain of the camera crew made up of operative cameraman John Polito assisted by Wally Menardis and 'Swede Larsen along with myself we shoved off for the land of salt water and ships

Arriving there we met "Tug Boat Annie" Brennan (Marjorie Rambeau to you) who turned out to be as rough and tough a sea going tug boat captain as any man could hope to see It seems that competition in the tug boat business is very keen which means that there are plenty of battles between the captains for the different jobs requiring tugs in the midst of which we find Annie fighting for her share of the business and usually getting it too in spite of her mortal enemy one Captain Bullwinkle played by Alan Hale

Be that as it may that is not my story I will let the pictures tell that part of the story and the movie tell the rest when you see it My story is different—a confession so to speak or maybe a weakness as you will Whenever I am on location I cannot resist the temptation to mingle unobserved among the crowds that gather to watch moom pitchers being made It is highly educational interesting and provokes a million laughs

I have found over a period of years that the most prevalent remark is what we might call wishful thinking out loud same being Gee lookit' Ain't it a cinch they are in the movies Gosh it must be great And that comes from the young and the old Well maybe it is but I often wonder how long most of them would last if they had to go through what eventually every actor and actress has to if they would be the success they hope to be in this business Just for the fun of it lets follow Miss Rambeau through one day while on location for 'Tug Boat

We will pick her up at her room in a hotel in Long Beach where she is staying while making the exteriors for her picture The phone rings harshly Sleepily Marjorie rolls over and answers A pleasant voice informs her 'It is five-fifteen time to get up' And that folks is A M, not P M With a few stretches and a yawn or two, out comes the Rambeau and into the tub By that time from an adjoining room comes Little Emma Marjories colored maid From then on Marjorie does not get out of Emma's sight for one second She watches over her all day like a hawk

Hardly out of the tub and with a few temporary clothes on there is a knock at the door and in walks Charles Uncle" Dudley her make up man Down plops Marjorie in a chair in a good light and for two hours without a let up "Uncle" throws everything in the book at her face in order to make her look her part of an elderly Irish female tug boat captain There are a million little lines that must be drawn around her eyes to give her that sea going squinty look there must be heavy eyebrows typical of an old salt grease paint lipstick darks spots for moles wrinkles where there are no wrinkles a definite line of make-up to meet the hairline of the wig that must be used All of this must match the preceeding days make-up to the minutest detail and so it must be day after day It takes real artistry to do this and much patience on the part of the actress

With a final squint Charlie says O K" and heads for the door and a bit of breakfast but not our Rambeau Oh no not yet As Uncle goes through the door he is met by Countess Gertrude Kuhn our lady's hair dresser In one hand she has a wig and in the other she has a bunch of hair pins and a lot of other silly looking gadgets that are supposed to hold a wig on securely in all kinds of sea going weather For another hour the lady must sit patiently while the "Countess slaps on a wig pulling and patting combing and brushing It must look the same as it has on all other days and so on throughout the picture Eventually that is finished With a sigh up jumps Annie and heads for the dining room However it is not to be no not yet for coming in the door is Kathryn Grams the lady of the wardrobe After another half hour of tugging pulling and squinting they decide that the clothes are are right and then milady is ready for breakfast a spot of orange juice and an egg maybe Then in walks Russ Saunders with a cherry Your car is waiting Miss Rambeau Out side piles and nine miles to the dock where the tug is tied up By that time it is nine o clock which was her shooting call

Met by Director Lew Seiler they sit and go over the lines for a few moments and then 'up and at em" The scene is one where the camera finds Marjorie on the wheel house deck about to go below to the engine room with some special orders for the engineer Skipper Seiler yells Quiet—roll em and we are off Marjorie comes out of the wheel house and down the ladder where she meets her cook Limey They have a line to do there In the middle of it a work boat towing a barge lets out a whistle that would lift a man out of his skin 'Cut" yells Seiler, Once more please' So we start again This time Annie goes to the engine room door when up jumps Ollie Garretson the sound man and says We will have to cut off the compressor in the engine room It covers up Miss Rambeau's lines 'Again we turn over down comes Annie gets to Limey and Limey blows his lines. Cut says Seiler once more please

The day is hot and the climb up and down that ladder is not easy for a man let alone a woman dragging along pounds of heavy woolen clothes. She must look her part and the clothes are the real McCoy An all wool skirt that hangs clear to the ground a woolen shirt such as men wear woolen socks, mens too old congress shoes a hat and regulation sailors pea jacket with a scarf around her neck

All the time this is going on we are all stripped to the waist and plenty hot at that However the take is no good and has to be done again Hold your hats here we go! In the middle of the next take Arthur Edeson has a light change The sun is partly under a cloud so that ruins the take Once more we go This time poor Annie makes it to the engine room and gets over her lines O K for everyone? asks Seiler Okay says everyone

Off the tugboat comes Annie headed for a bit of shade and a chair She is about to take off her heavy coat and get cooled off when up runs the company doctor with a No no Miss Rambeau don't take off that coat Do you want to get a terrible cold? Poor Annie about to cook in her own steam looks at the doctor with murder in her eye and then realizes that he is right After a cool drink and time to settle down for a while off comes the coat and she enjoys a bit of comfort for the first time that day In about fifteen minutes Edeson yells Cameras ready So

(Continued on page 8)



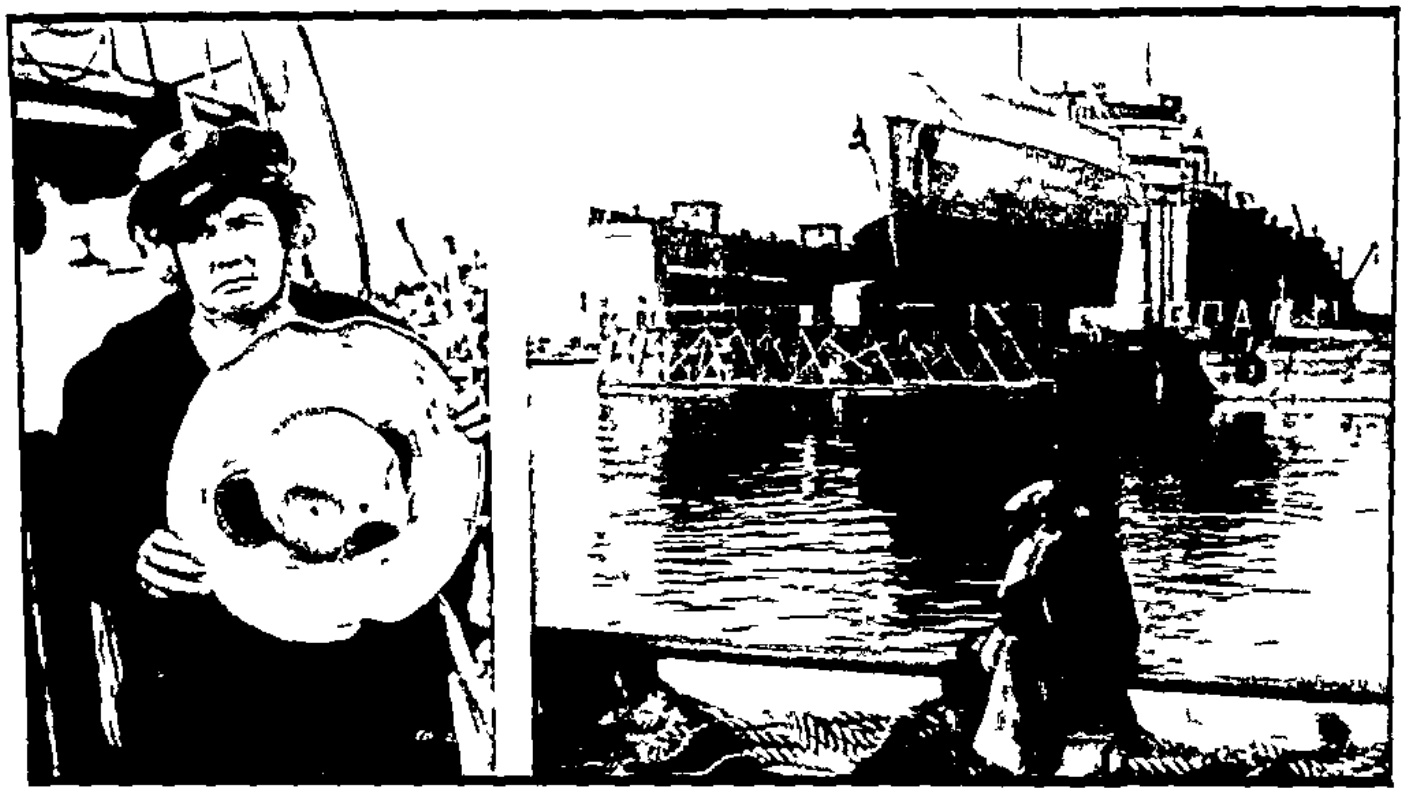
Tugboat Annie Sails Again" is rich in character studies as this layout of stills by Fred R. Morgan, member of Local 659 IATSE indicates Paul Hurst (inset) is Annie's first mate The title role is endowed with the full artistry of capable Marjorie Rambeau who is the personification of the fiction character known to millions



Annie listens resignedly while Captain Bullwinkle gives her a dressing down for snooping around his tug The burden imposed upon Miss Rambeau in wearing the heavy woolen clothing necessary for authentic characterization while working under a typically warm Southern California sun is described in the accompanying article



Concerned about a million dollar salvage job Annie sneaks aboard the tub operated by her butter competitor Captain Bullwinkle who is the popular Alan Hale He surprises her in the act of espionage and shows his opinion of her tactics with a disdainful laugh The stills were made at the Los Angeles Harbor waterfront



Despite her salty background and outward roughness Annie is repressing constantly her womans instincts But they break out at such times as the deep hurt she feels when the Captain gives her a special kind of straw hat and tells her the holes are not for her eyes also when she loses the big salvage job and has a good cry

CHEMISTERY IN PICTURES

By R R M CARPENTER, JR , of E I du Pont de Nemours and Company

CHEMISTRY is playing an increasingly important role in every motion picture filmed today as shown by a survey of the uses of chemical products in the industry just completed by E I du Pont de Nemours & Company Inc

Even though the word does not flicker from the lights of marquees it was chemistry that made motion pictures possible in the first place In addition chemical developments have contributed to many of the motion picture industry s most important advances Chemistry has increased both realism and fantasy on the screen Laboratories behind the scenes have added to the entertainment of millions

Much progress has been made in the photographic field during the century since Daguerre Talbot and others did their important pioneering work Today more than 150 types of motion picture film are being made utilizing raw materials from a wide variety of sources Among these materials are cotton from the South nitric acid from synthetic ammonia made in West Virginia sulfuric acid from sulfur mined in Texas and Louisiana salt from New York and Michigan bromine from the Atlantic Ocean gelatin from the hides of Western cattle and silver from the Rocky Mountains Another important film ingredient is camphor formerly obtained from the camphor tree of far away Formosa owned by Japan Today the chemist makes camphor chemically identical with the natural product, using turpentine from the Southern pine tree Approximately a half million pounds of camphor are consumed annually in the manufacture of motion picture film

At Niagara Falls coke and lime are fed to giant electric furnaces to obtain calcium carbide which is finally worked up into acetic acid and acetic anhydride Cotton linters treated with these two chemicals are transformed into cellulose acetate now widely used for home motion picture film and safety X ray film From coal and phosphate rock come still other chemicals used in making cellulose acetate film

But the contributions of chemistry to the motion picture industry have gone far beyond the film proper To the layman probably the most fascinating and mystifying operation in motion pictures is the animated cartoon and chemistry plays an important part in this type of picture The transparent Pyralin nitrocellulose plastic which has become a major factor in this increasingly popular art, is a product of the chemical industry

The painted background remains the same in each scene of the animated cartoon The characters however are drawn on transparent Pyralin sheets and minute changes of position are made in each drawing The sheets are then superimposed on the background and photographed in proper sequence to produce the finished illusion of cartoon characters in action

Perfect transparency is the essential quality in animating work and the chemist alone has been able to create a satisfactory material In the production "Snow White" more than a quarter of a million individual "Pyralin" sheets were used and these drawings were selected from more than two million actually made by Disney animators

Chemistry's colors also have made valuable contributions Dyes and pigments have not only enabled Hollywood to produce scores of popular films in color but quick-drying paints have become a necessity in scenery construction Paint drying formerly was a slow tedious process and production often was delayed for days Now actors can work on the set within three or four hours after it is painted

Scores of products devised in chemical laboratories are employed every day on moving picture sets Plastics heavy chemicals, Cellophane" cellulose film refrigerants and fine chemicals used in cosmetics are only a few of the unknown "actors" to perform before four billion people each year

"Lucite" methyl methacrylate resin a plastic material perfected in the last three years is rising rapidly to cinematic importance The light refractory powers of this crystal-clear plastic enhance the visual effects of photography by the concentration of light on desired points Its definite light-conduction qualities have reduced diffusion to a minimum In the motion picture production Eternally Yours" movie magic was made when Loretta Young appeared in a giant retort made from "Lucite" which in turn was fashioned by the chemist from air coal and water

'Cellophane" plays a significant role on the silver screen Most important are its decorative uses In the production "Star For a Night an entire seaside setting was created with "Cellophane Seventy five thousand feet of blue cellulose ribbon were used in the sky curtain alone Costumes gaily-colored beach umbrellas and flowers all were made of this filmy substance Decorative boat sails were fashioned from another product derived from chemistry known as "Cel O Glass" plastic-covered wire mesh

Effects hitherto not achieved were created in the color film A Midsummer Night s Dream" Direction and production men were confronted with entirely new problems in designing backgrounds scenes and costumes To achieve the illusions called for in the Shakespearean fantasy a thorough study was made of the possibilities of "Cellophane

The result was a dazzling "moonbeam woven from fifty thousand yards of cellulose film The strength of the "moonbeam was sufficient to support the weight of dancers taking the part of fairies, as called for in the stage instructions In all 700 000 yards of transparent gossamer strands were used, 90 000 of which were contained in Queen Titania s train

Rock candy once was commonly used in making plate glass bottles water glasses, and other articles to be thrown in slapstick comedies or scenes of bar room fights Today it has been replaced by a chemical material known as breakaway" glass, which has desirable photographic qualities When broken "breakaway glass merely powders preventing "victims" from being injured when hurled through windows or struck with flying objects In one production scene 900 beer steins made from this substance were destroyed

The use of dynamite may seem surprising but it is most necessary in the production of certain films In battle scenes for example dynamite carries to the spectators the impression of actual shells and bombs exploding

Chemical refrigerants have greatly simplified the presentation of such productions as the "Ice Follies of 1939 "One in a Million and "My Lucky Star They have enabled producers to photograph skating scenes directly on the sets By means of certain chemical the effects of fire fog and snow likewise may be created within the studio or on the sets

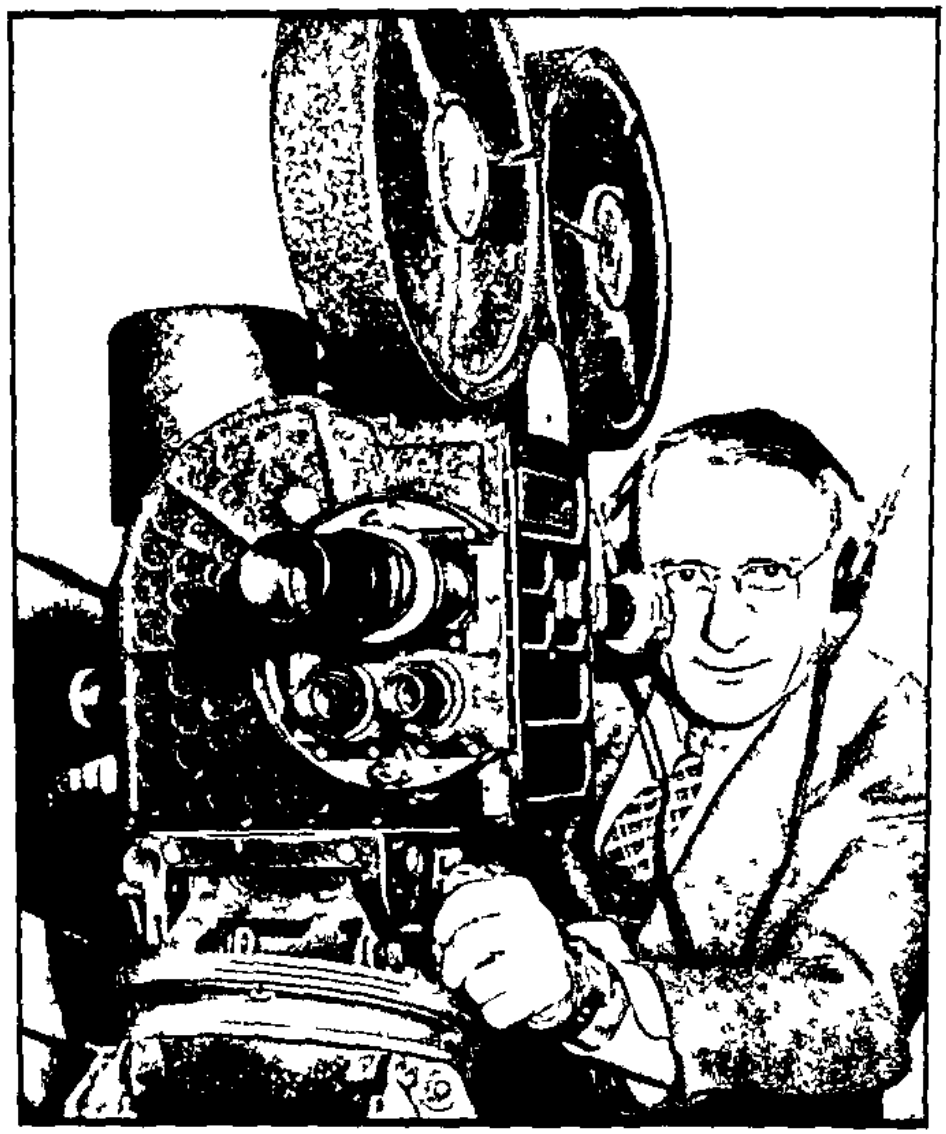
In the production of sound pictures the projection screen plays an important role in the acoustic effects obtained Since sound equipment in many theatres is located at the rear of the stage it is necessary that a porous material be employed so that the sound may be easily carried to the audience During the early years of sound pictures screens were made from a closely woven wire mesh which produced a distinct metallic sound Loosely woven fabrics then were employed but despite acoustic improvements, the material possessed poor optical properties

A fire resistant coated fabric screen material with improved optical properties is now made by the Du Pont Company This material is perforated by the screen manufacturer to make it suitable for sound transmission through the screen

As the leading producers of film land rack their brains for new ideas new stories and new stars to entertain the millions of movie fans throughout the nation so will the research laboratory continue to release scientific achievements which will further stimulate the impression of reality upon the theatre screen



THE EYES OF TEXAS



Two favorite sons of the Great South west are shown herewith Above San Antonio's fiery Mayor Maury Maverick friend of Labor and of all news reel cameramen including Jimmie Lederer (right) whose beat covers the Lone Star state In one and other southwestern points

By CHARLES SHAW

News Editor Radio Station KTSA San Antonio

THIS country is mighty big stretching some three thousand miles or so from the wilds of Hollywood to the jungles of New York but if you're hunting one of the most energetic successful and congenial fellows in the Newsreel business it's a simple matter to locate him

Just aim your camera at this country's biggest state Texas and bring it into focus on the Capital city Austin There you'll find Jimmie Lederer a young fellow who yet is an old timer a one-man whirlwind who has only one ambition—to get the job done and done right

Equipped with a battery of cameras that include the latest Sound Akeley a couple of Eyemos emergency lights and many dollars worth of extra paraphernalia—you will always find Jimmie getting in or out of his car which is equipped for newsreeling and bears the official Texas State license plates "71 and going after something that looks like newsreel material If Lederer doesn't get it it isn't much of a story is the reputation he has earned

A few vital statistics Jimmie was raised in San Francisco California and as soon as he was able to walk he wanted to run about the world in search of thrills and excitement His first real work was as a musician He played banjo and fiddle but that was too tame Came the War and Jimmie was on his way to Europe grabbing camera experience over there When the excitement across the seas died down he returned to this country and became an exhibitor showing film instead of making it Lederer was a success but he yearned for more excitement so he sold out Not however without making a neat profit and achieving a reputation as a successful exhibitor He's been a newsreeler from then on

Lederer being in Texas you might expect to find him arrayed in a ten gallon hat and a pair of boots with a couple of guns in one hand and a camera tripod in the other mounted on a cow pony but he's not the type He's a double for former Mayor Jimmie Walker of New York in every way except unlike the ex Mayor Jimmie (meaning Lederer) is always on time

Jimmie has been newsreeling for a good many years now and he's worked for all the major newsreel companies Many of his

pictures have been nation wide scoops To cite a few, he covered the "Widowed Child Mother," a girl who left school at the age of eleven was married and became a widow and a mother by the age of twelve, the 'New London School Disaster,' in which several hundred children and teachers met death "The Bathtub Safety Device" a screwball invention a Rube Goldberg idea consisting of merely a rope hung from the ceiling over the bathtub which the bather could grab if he felt himself slipping (the inventor paid over $300 to have the idea patented—just to make it safe to take a bath on Saturday night), then again the "First Southern Newsprint Made from Native Pine," which started off a six million dollar plant in the South and opened up a new industry These are just a few Lederer has covered several hundred stories in the regular run of news and many others for the Universal Fiction Reel

Which brings us up to Jimmie's latest achievement A month or so ago San Antonio's fiery Mayor, former Congressman Maury Maverick called him to find out why a good two reeler couldn't be made of San Antonio Lederer said there was no reason at all, and with that he was commissioned to go to work He made his shots took them to Hollywood and soon had them combined in a film 'Crossroads of America' that San Antonio's proud to show any place Lederer was aided by William C. Bryan program director of Radio Station KTSA who set up the story and did a swell job on the narration Some of Hollywood's top notchers commented that it was one of the best pictures ever made of a city

Jimmie tells this story about the picture "I had heard that Maverick was turning the town of San Antonio inside out with the police fire and other departments getting the benefit of Maverick's streamlining' When I started setting up the scenes I wanted around the City Hall Maverick seemed hard to approach He gets publicity without having to ask for it and for a while it seemed that he might take his time in cooperating

I tried to make Maverick an oomph man but he is built along the lines of a cement mixer and weighs just about as much so it was a little tough to perfect *the oomph business Before the final scenes* were finished, Maverick who had the reputation of streamlining the City of San Antonio streamlined a newsreel man at the same time It was one of the toughest picture making jobs I've had in a long time but it was worth it The mayor's really a swell guy

Jimmie Lederer is happily married and is the father of two pretty girls Lillian Bland and Rita Jeanette He owns his home in Austin Texas He's been a member of Local 659 I A T S E for many years

Incidentally through his alertness several Texas personalities have received some nice breaks The most recent was Mary Healy who made her first appearance before Jimmie's camera on the Gunter Hotel Roof, when she was singing with a small orchestra She's now under contract with Twentieth Century Fox and is one of the coming starlets

Jimmie has a philosophy about this newsreel business Here's how he expresses it 'To the layman it may seem like a cut throat business, trying to beat the other guy all the time, but that is not so When I look back over the years I know that if it weren't for good friends in the business I'd not know how far I'd be today"

Lederer's gone far in newsreeling whether due to his friends his own abilities or both He holds his own with the best of them and gets a lot out of a little film Jimmie is appreciative of what his friends have done for him and figures that the best way to repay them is to help others on the way up He's doing that today

Black and White Advantage

● A visitor on the "Charter Pilot" set at 20th Century Fox, who turned technical adviser in an effort to be helpful probably won't try it again

The gentleman was watching Lynn Bari go through a scene for the picture in which she vainly tries to select an evening gown to go with a silver fox fur In the scene a silver gown doesn't please Lynn and turning to her maid—played by Etta McDaniel—Miss Bari asks for "that chartreuse one" Etta turns to the ward robe closet and hands her a shimmering blue evening gown

This amazed the visitor who after the scene pointed out to Director Eugene Forde that chartreuse is a yellowish green certainly not blue He blushed with embarassement however when the director smilingly informed him that chartreuse and light blue look the same on black and white film

TUG BOAT ANNIE

(Continued from Page 3)

on goes the coat and back to the boat, and so on hour after hour, all day

Eventually comes six o'clock and the long looked for "Wrap 'em up" from Russ Saunders Miss Rambeau's standby car is ready to take her back to the hotel and a restful bath But wait! That isn't all for poor Annie She is about to climb into her car when up runs little Wandra Sybil with a bit of paper on which are written a series of numbers "Your scene numbers for tomorrow Miss Rambeau so you may study your lines tonight Good night Miss Rambeau"

Home goes milady too tired to eat or do anything but rest. And tomorrow is another day with more of the same routine

All of which makes me wonder how long these people in the crowds to whom I listen could take that kind of medicine and still say 'Gee ain't it a cinch to be in the movies" I wonder

high speed CAMERA

Did You Know That . . .

When a cat laps milk the fluid is carried to its mouth on the bottom instead of the top, of its tongue?

When a pencil is pushed into a soap bubble, the bubble doesn't break? It breaks when the pencil is pulled out

Falling drops of liquid are followed by smaller drops, invisible to the eye?

These and other amazing facts are brought to light for the first time by a camera that photographs movements too fast for the eye to see It is the strobo-cope camera with which odd phenomena are being filmed for "Quicker'n a Wink," new Pete Smith novelty being produced by Metro Goldwyn Mayer

The wonders are made possible through camera and lights developed by Dr Harold Edgerton in association with Kenneth J Germeshausen and Herbert E. Grier of the Massachusetts Institute of Technology Dr Edgerton remained at the studio working with his apparatus by which marvels outlined in a script by E. Maurice Adler were placed on film George Sidney directed

The new camera operates with a light capable of flashing as quickly as a quarter millionth of a second The flashes accomplish the same objective as the shutter used in ordinary motion picture cameras The film is moved rapidly and continuously past a lens as the flashes are timed to illuminate objects being filmed This is done at such intervals as to make a steady series or pictures as on the film of the standard camera In most of the work done at the studio the film moves past the lens at a rate of 1000 "frames" or individual pictures per second

The light used is an argon filled tube Electric energy is stored in a condenser then at the desired instant released into the tube The current passing through the gas, ionizes its atoms, which combine and in doing so become a source of brilliant light The whole process can occur in the quarter millionth part of a second

The camera's sprocket is equipped with an accurate contactor which synchronizes the flashes of light with the motion of the film To the eye the lamp appears to glow steadily, so rapid are the flickers or alterations

Dr Edgerton and his associates discovered the use of the light for camera work while developing it at the Institute as a stroboscope to be used in measuring speed of machinery The first camera produced was a single-flash device and the motion

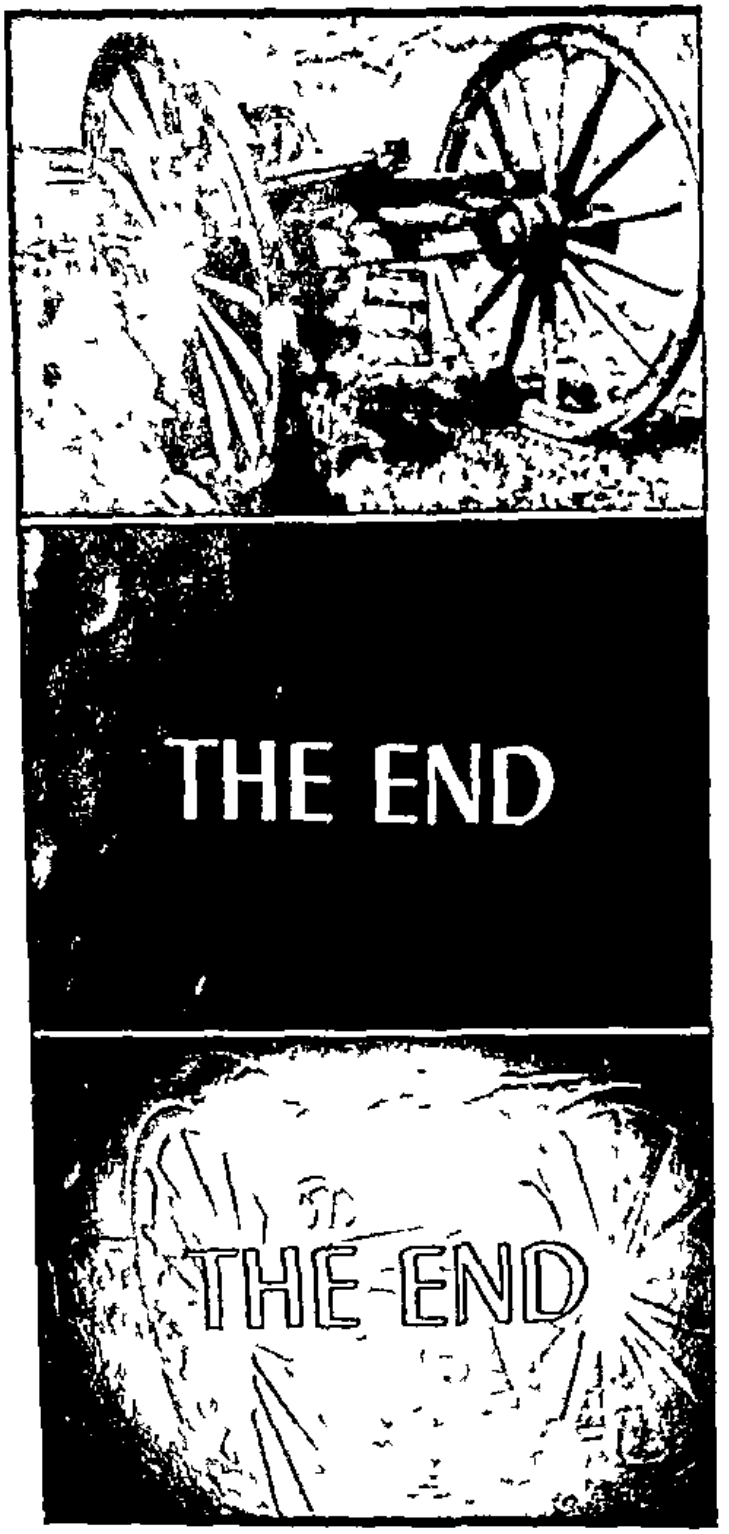


(Top, left) Dr Harold Edgerton of the Massachusetts Institute of Technology demonstrates the Stroboscope in this scene from "Quicker'n a Wink," Pete Smith's latest Metro Goldwyn Mayer Specialty The Stroboscope is this light, which can be made to 'flicker' as rapidly as one hundredthousandth of a second, and makes it possible to stop action too fast for the human eye to see To be seen in the Pete Smith short will be a bullet shattering a light bulb a golf ball boring its way through a telephone book and a hummingbird in flight The Strobotac, by which Edgerton is controlling the "flickers" of the light, is used by engineers and in precision machine work (Top, right) Here is the Stroboscope camera which takes pictures in ultra slow motion Dr Harold Edgerton (left) explains the instrument to Commentator Pete Smith In most of the speed work done at the studio the film was moved past the lens of this camera at a rate of 1000 to 1500 frames per second (Lower left) "Ready" Dr Harold Edgerton gets set to photograph Charles Lacey driving a golf ball through a telephone book (Right) There's more to a place kick than the human eye can see And if you don't believe it watch Tex Harris kick the pigskin. Toe smacks the ball and sinks deep into the pigskin before the ball leaves the ground

picture application developed from that Already the device is being used in a wide field Study of engineering was the first Newspapers are developing the use of the single flash device for fast action photographs

The new Pete Smith short marks the first application of the invention in a professional motion picture studio A series of scientific surprises are being filmed at ultra high speed which projected at normal speed will slow motions too fast to be seen by the human eye to readily discernible motion which Smith will explain and comment upon

Two devices the Strobotac and the Strobolux are today being extensively used and commercially manufactured both based on the time interval flashes developed by Edgerton and his associates The Strobotac is a speed measuring device used by engineers in which flashes are adjusted until an object in motion appears to the eye to stand still when its speed is calculated The motion picture equipment is capable of speed up to 2000 expores or frames to the second on 35 mm film



CINEMACHROME LAB EXPANDS

● The Cinemachrome Laboratory located at Lillian Way and Santa Monica Boulevard has during the past month entered the 35mm black and white processing field Completely revamped and with considerable new equipment installed, the plant is designed to fulfill a long felt need for a service operated mainly to satisfy requirements of the independent producer

In addition to black and white machine processing the facilities offered include all phases of optical printing such as dupes lap dissolves, process projection prints, montages and a new and novel method of taking titles This last item is of particular interest to the small producer, working on a limited budget who is sometimes forced due to excessive cost, to release his product with very plain titling which is far from satisfactory

It is common knowledge in the industry that the dressing of a picture often covers other minor deficiencies in the presentation of the story itself and for this reason the larger producers leaving nothing to chance spend considerably more on titles than the smaller independents can afford Cinemachrome announces a means of circumventing this troublesome problem by a simple method not previously applied in motion picture production

The producer supplies the laboratory with an 8x10 still of a setting appropriate to his picture By photographic and chemical manipulation this still is reproduced in bas-relief behind his title giving the appearance of carved stone or clay modeling on which the lettering of the title itself appears in bold relief It must be borne in mind that this is not the usual method of relief printing by means of offset masks so commonly used Although only one example is shown in the illustration many varied effects may be obtained even to the point of using the opening scene of the picture as a title background which dissolves into live action with the disappearance of the last credit card

Other facilities offered by Cinemachrome are cutting rooms, sound theatre and by arrangement with Gille Bros a six channel dubbing service Also obtainable, at a very low cost is a test stage with lighting camera and sound equipment.

It has been the aim of the management, in setting up the plant to supply under one roof all the requirements of the producer who does not have access to such accommodations, and it is also the firm belief of those in charge of physical operation that the small independent is justly entitled to the same chemical treatment of his film as is obtained by the largest producer Because of time and financial limitations the independent must surmount greater production obstacles than the major companies and for this reason alone his product all along the line requires careful consideration Complete efficiency so that no loss will be encountered is a prime necessity and this necessity is recognized by Cinemachrome

Although processing only black and white at the present time Cinemachrome is conducting extensive research into the color patents held by them covering both 16mm and 35mm color photography

Calculated to strengthen the corporation not only financially but in equipment and processing space as well a constructive two-year program has been laid out under an entirely new management headed by Mr James E Guillet

Based on Elizabeth Page's best selling novel The Tree of Liberty, Frank Lloyd Pictures Inc has captured in The Howards of Virginia the essence of colonial Virginia and the spirit of independence that resulted in the establishment of the United States of America

Photographically the costumes of the period and the architecture of Williamsburg Virginia where much of the production was shot provided an interesting atmospheric background Bob Coburn member of Local 659 IATSE capitalized upon this combination of factors to secure a fascinating portfolio of stills which are presented on the following five pages

On the facing page are closeups of four principal members of the cast A pictorial synopsis of the production is given on pages 12 and 13 while a group of informal shots of camera crews cast and other features of interest appear on pages 14 and 15

The Howards of Virginia" is another important addition to the growing list of motion pictures based upon the founding and development of this nation—a saga unequalled in the history of the world



(Top) Cary Grant, Martha Scott

(Bottom) Richard Carlson Pa



1—In an aristocratic school democratic young Matt Howard farmer's son finds a kindred soul in Tom Jefferson



2—Years later while following his profession of surveyor Matt is reunited with Tom and introduced to Jane Peyton



5 She stays however and helps her husband establish a plantation estate and presents him with three children



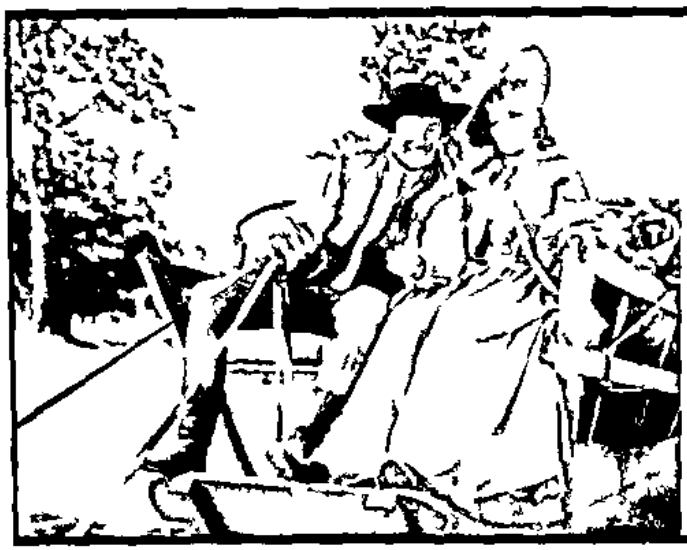
6—Meantime "taxation without representation" is breeding revolt climaxed by the historic Boston Tea Party



9—Matt rides away to join the Continental army in its fight for freedom His sons eighteen and sixteen follow



10—They find their father in Morristown N J ragged and emaciated like the rest of Washington's valiant army



3—Matt and Jane marry The br de is shocked at the contrast bet een her ne hon e and the Peyton plantat on



4—Her neu ne gl bors a e uncouth p oneers rest ng a l v g by l ar l n anual labor and she is tempted to leave



—Matt s a lea ler n the stubbo n oppos t o to l a l a ment the s tuat o becomes tense u th r ots and deaths



8—Th e Jame l M nute Men openly conduct dr lls a p ep- a at on for ar n f ont of the s a ely Gove no s Palace



11 The econc l a on of Matt and h s son afte the s o of ndependence s on is a d amat c ncident of the p ctu e



12 W th the u a back of them Matt and Jane real e that th e r futu e l es n resto at on of Albe ma le Hall



of these informal scenes photographed by Bob
ng of the Frank Lloyd Pictures, Inc , production

THE HOWARDS

● *The photo layout on the preceding two pages shows (Top panel from left) Jeff Gibbons (behind camera), Tommy Morris assistant cameraman Bert Glennon (behind camera) and Bobbie Gough assistant members of the camera crew and Director Frank Lloyd with hand raised Next is script girl Vesta Jamison Lloyd and Glennon Lining up an angle shot are Lloyd William Kelly second cameraman and Gough who is explaining a lens filter*

(Center panel from left) The crew takes time out to listen to a radio address by the King of England Lloyd threatens Cary Grant with a bucket of water, while Richard Carlson enjoys the act Director Lloyd (right) broadcasting from William and Mary College at Williamsburg on "We the People" program

(Bottom panel) Grant and Martha Scott provide the picture's heart appeal In search of a new camera setup we see Grant Fritz Collins second assistant director Headman Lloyd and Billy Tunnel first assistant director What an appetite that outdoor location business gives the crew Large crowds followed the company while working in Williamsburg where historic buildings such as the Governor's Palace in background added realistic notes

Motion Picture Photographers and Technicians Sought for Government Service

● The United States Civil Service Commission has announced open competitive examinations to secure motion picture photographers and technicians for Government service The examinations cover the following positions Motion picture photographer six grades with salaries ranging from $1 140 to $2,600 a year, head aerial motion picture photographer also the principal and senior grades with salaries ranging from $2 000 to $2,600 a year, motion picture technician six grades with salaries ranging from $1 140 to $2,600 a year The salaries are subject to a retirement deduction of 3½ percent

Applications must be in the Commission's Washington office not later than September 16 if received from States east of Colorado and September 19 1940 if received from Colorado and States westward Applicants must have had broad progressive, and responsible full time paid experience in high grade motion picture photographic work as cameraman photographer from a plane in flight, or in film processing and laboratory work the responsibility assumed varying with the grade of the position No written test will be given but applicants will be rated on their qualifications as shown in their applications and on corroborative evidence

Further information as to the requirements for the various grades, and application forms may be obtained from the Secretary of the Board of U S Civil Service Examiners at any first or second-class post office or from the United States Civil Service Commission Washington D C. or forms 8 and 3239 may be obtained from 506 Federal Bldg., Los Angeles

There is on file at the offices of Local 659, International Photographers Form 113 with complete information as to qualifications requirements and salaries

Early Photos Prized

● John Barrymore is waging a campaign with the 20th Century Fox property department to pry loose some valuable photographs which he wants for his own collection

During the filming of "The Great Profile," the prop department hung a couple of dozen photographs on the walls of a set representing a theatrical agent's office Among these photographs were some of Barrymore which he himself had not seen for many, many years There are two priceless pictures of him in the role of Hamlet, and about seven others from different plays covering a long number of years One of them is from one of his first dramatic plays in which he appeared when he was in his early twenties

Barrymore has offered all sorts of prices to buy the pictures from the studio but so far they won't sell The head of the prop department claims they are his most valuable props for theatre or agent's office sets. They have been used over and over again to add tone when it comes to set dressing

Art Director Picked

● Jack Otterson art director at Universal studios, has been appointed chairman of the "art directors' section" of the Academy of Motion Picture Arts and Sciences

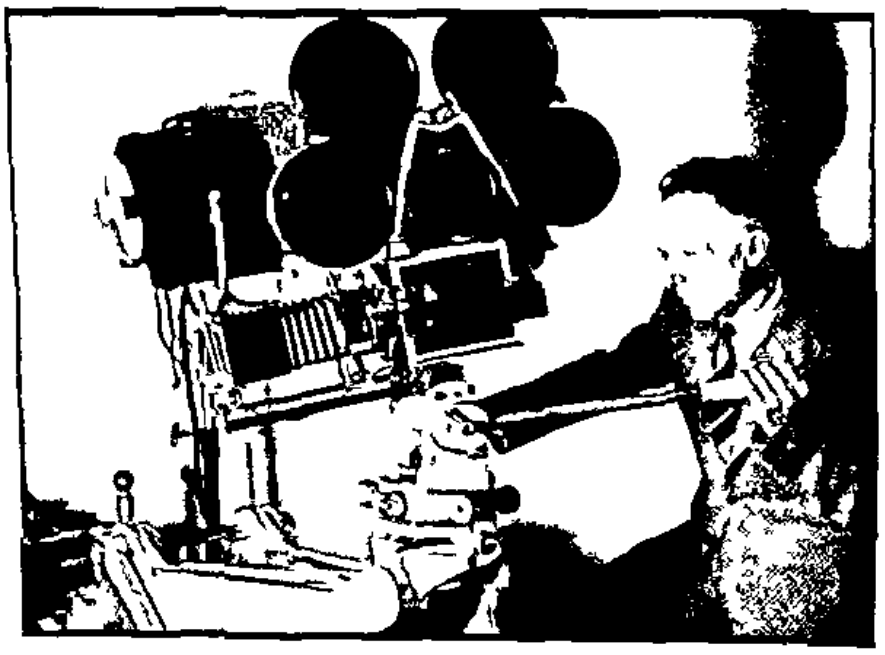
According to notification from Academy executives he also will automatically become an ex officio member of the organizations executive committee

As chief of the Universal art department Otterson has created settings for all of that company's films for the past two and a half years.

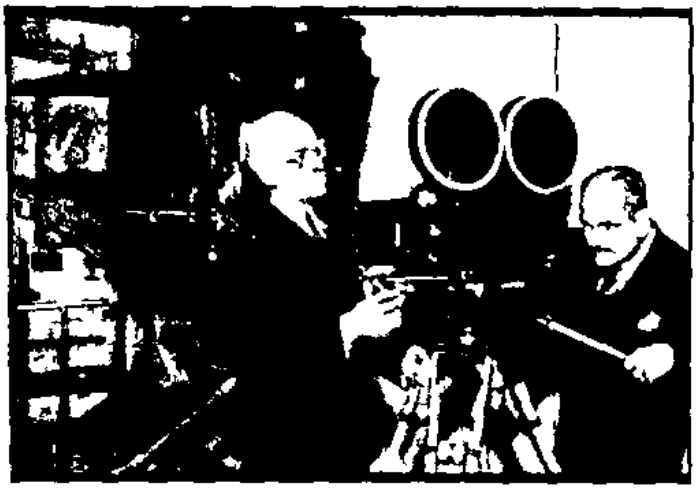
Cykora Now In Four Contrasts

● For photographers who prefer a glossy projection paper with warm black tones, Agfa Cykora Paper is now available in four grades of contrast

The new fourth contrast grade which is available in Cykora Glossy only is intended to be of especial value to news photographers photo finishers and commercial men as it considerably extends the range of negatives suitable for this warm tone paper



Introducing Joseph Yolo who recently became a member of Local 659 IATSE but already has contributed to the pages of the official publication In fact the article 'King of the Kenai' which appeared in the August issue of INTERNATIONAL PHOTOGRAPHER *was written by him but through a regrettable error was attributed to Clalmer D Sinkey a veteran member of the Local Mr Sinkey works in the same great North Pacific territory as Mr Yolo and merely acted as forwarding agent for the interesting manuscript However, veteran Sinkey has been a frequent contributor to these pages hence the confusion in giving proper "screen credit" Our apologies to Mr Yolo shown above with his Bell and Howell Cine Color outfit and our thanks to Mr Sinkey for setting us right —The Editors*

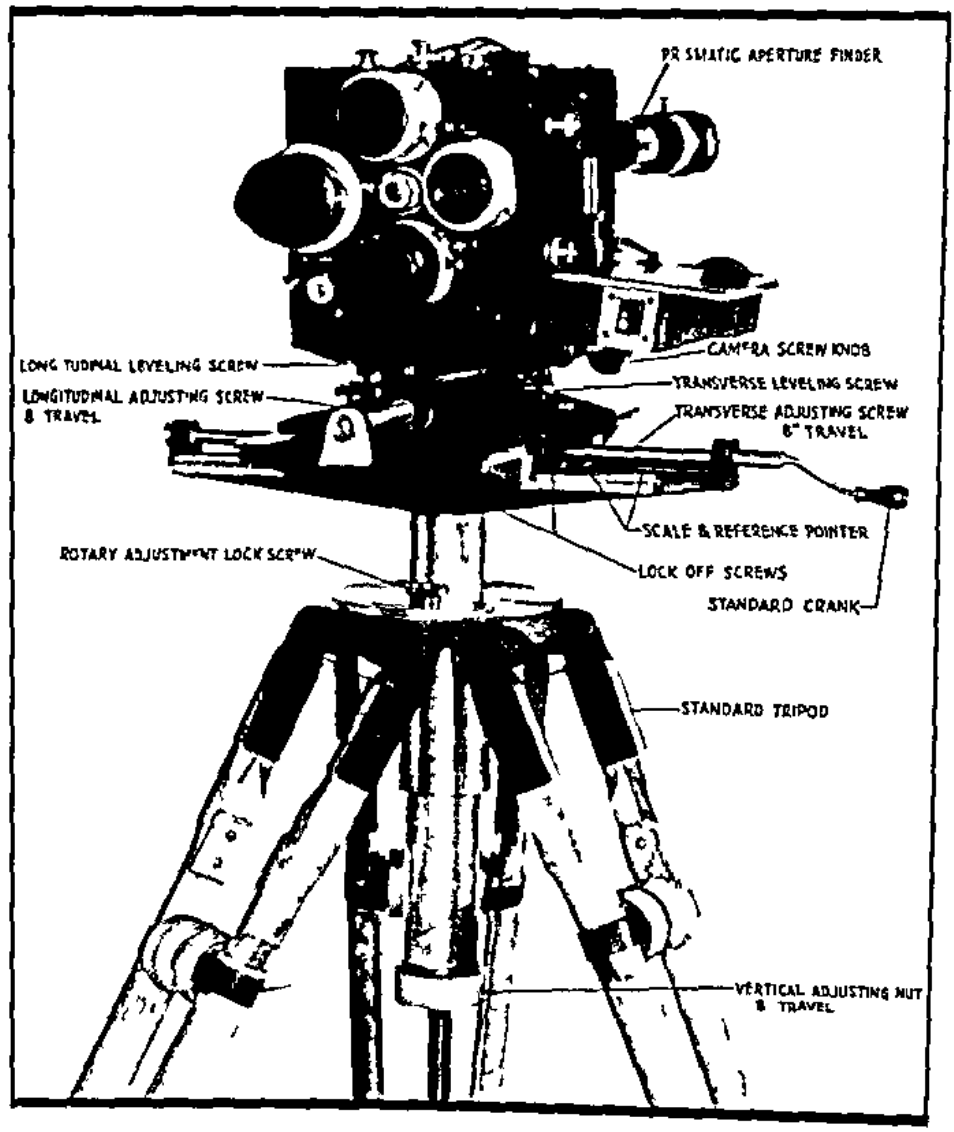


20 TH CENTURY CAMERA

Modern as its name is this new silenced camera, developed by Twentieth Century Fox Camera Department to streamline photographic operations

By DANIEL B CLARK, A S C.

Comparative sizes of Blimp equipment and 20th Century Silenced Camera are strikingly shown above Grover Laube (left) and Dan Clark inspect the new Camera At right the camera's Septi adjustable process mount and viewing attachment are illustrated



In keeping with the industry's efforts in modernizing standards and equipment the Twentieth Century Fox Camera Department under the guidance of the author has developed a number of new and unique photographic units now in use topping the list with the new 20th Century Silenced Camera

The working model of the 20th Century Camera was commenced by the inventors Grover Laube Robert C. Stevens and the late Charles Miller of our camera department, in 1934 or thereabouts It was finally put into production late in 1936 on the Shirley Temple pictures and since that time has been used exclusively on that starlet's pictures

Before the model was completed or sometime around the middle of the summer of 1936 the second or improved model began to take form Plans were made refining certain parts of the model and the second unit was built and placed in production in 1938 and since that time both models have been used with great success

Early in 1939 our studio executives saw the advantages of this equipment and decided to have an additional ten cameras built, which finally terminated in letting the contract to the Cine Simplex Corporation of Syracuse New York

We who are close to the job realized the necessity of making refining elements and adding to the efficiency of the camera so we rolled up our sleeves and went to work sometimes burning the candle at both ends with the result that at the date of writing this article we have just received the first of the new cameras and after shooting the initial tests we are confident that we have succeeded in whipping together one of the greatest cinematic equipments ever built

The following preview of the new model reveals some of its features

The comparative weight of the new 20th Century Camera to the blimp setup is that the new camera weighs 115 pounds including the tripod while the present blimp equipment weighs approximately 425 pounds without the tripod or carriage The movement in the new camera is of a type that insures sufficient noise reduction to enable us to work without the blimp It is equipped with an adjustable shutter with a maximum opening of 200 degrees the benefits of which are self evident



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SPEED alone is not enough in modern portraiture There must also be depth grada tion modeling fine rendering of flesh tones Tri X Panchromatic gives you speed plus these qualities The unretouched illustration above is from an 8 x 10 negative made with 14 inch Ektar lens *f* 16 1/75 second with front illumination of only two No 1 Photo-floods Eastman Kodak Company Rochester N Y

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FOR EXTREME SPEED PLUS QUALITY



WHEN THE DALTONS RODE

Crammed with the kind of thrills and action that used to keep small boys of another generation in tingling suspense while they read the latest dime novel Universal Studios product on "When the Daltons Rode" provides still photographers with the type of material that vitalizes the printed page

Judging from the stills reproduced here only sissies used the depot to board a train Your he-man either transferred from his cayuse or dropped in to see the passengers and crew from a convenient rock And of course every western production has its stagecoach The four Dalton boys are depicted in business-like pose at top right

The story was written by Emmett Dalton in book form As adapted for the screen it appears in the following synopsis prepared by Universal

● Into the frontier town of Coffeyville Kansas comes Tod Jackson (Randolph Scott) to open a law office and to renew acquaintance with Ma Dalton and her four sons Bob (Broderick Crawford) Grat (Brian Donlevy) Emmett (Frank Albertson) and Ben (Stuart Erwin) who are honest ranchers of the district

Tod also meets Julie King (Kay Francis) the town's winsome telegraph operator who is engaged to Bob Dalton And for Tod and Julie it is a case of love at first sight

A land company is using crooked surveys to throw the ranchers off the property Quarrelsome Grat Dalton wants to fight but Caleb Winters (George Bancroft) rich man of the town counsels peaceful means and Tod agrees to act as attorney for the ranchers



When the surveyors reach the Dalton property there is a fight and Ben's horse knocks down a land company man killing him. Town officials in the hire of the company insist upon a murder trial and Ben is railroaded by perjury testimony. With the aid of Ozark Jones (Andy Devine) the red man the Daltons arrange for Ben's escape to a neighboring town where Jackson hopes he can get a fair hearing.

En route to the town Tod's stage is held up by masked men who claim they are the Daltons and when Tod tries to show them up they beat him into unconsciousness. The stage reaches town with word that the Daltons have held it up and when the boys ride in they are arrested as bandits. They shoot their way to freedom and hurry back to their ranch only to find it burned down.

Frantic for the safety of Ma Dalton the boys go back to Coffeyville. Julie takes them to their mother but again the boys are arrested. An angry mob forms and in fighting to freedom Ben is killed. The other Daltons really fugitives now figure they have the name and may as well have the game. They embark on a spectacular career of crime unparalleled in frontier annals.

Meanwhile Tod's investigations of the land company show Winters to be the power behind the plot. Julie sees Bob and tells him of her love for Tod and Bob's love for her turns to hate for Tod. The boys plan a double bank robbery in Coffeyville as their final crime and they arrive as Tod is accusing Winters. In his office Tod tells Bob about while the other gang members are robbing the banks. The townspeople battle the Daltons and all the robbers are killed but not before Bob kills Winters. Tod and Julie are left to face the future together.

Photos by Ed Jones
Member Local 659 IATSE

GUARDING NEGATIVE QUALITY

By S C O'BRIEN

★ **Carefully controlled laboratory processes employed in developing Hollywood's millions of feet of negatives contribute to high quality of nation's motion pictures, a standard which is consistently being raised by technicians.**

To obtain the best quality in the positive print it is first necessary to have that quality in the negative In most laboratories today much of the processing is done on the continuous type of machine which affords a development uniformity and consistent quality

The process of negative developing in motion picture work basically is not unlike that of developing the still negative in the kitchen sink. However, the unique demands of modern studio production methods have created problems that have been solved in various ways by different laboratories throughout Hollywood Whereas in the home process there is involved only half a dozen negatives with a like number of exposures in the laboratory we are concerned with thousands of feet of film with hundreds of gallons of chemicals to control and with the subsequent important problem of drying

When the motion picture industry was in its infancy the hand tank method with its two hundred foot racks was suitable for the needs of the times However with the advance of laboratory techniques the demand for faster footage development and more consistent quality led to the evolution of various forms of mechanical processing The old rack timing methods of development control have been replaced by the modern highly efficient use of the sensitometric gamma control

This method involves the exposure of a sensitometric exposure upon a strip of negative film which is developed at a given time then read on a densitometer The readings are then plotted and the curve derived from this action gives the density speed ,and gamma of the emulsion in use After these findings it is then possible to develop the negative to its own emulsion characteristic This method may be used on the various negative emulsions While on the subject of gammas it is well to mention the importance of sensitometric control upon the entire process of developing Undoubtedly it is the heart of the process, for upon it depends the actual developing time of the negative and control of the "soup"

Each laboratory in Hollywood has its own particular production demands, however, all the methods may be roughly classified under two general headings (1) The end test strip method (2) Sensitometric control, as mentioned Though both of these methods utilize the sensitometric strip to maintain and control the "soup," basically, the negative timing is different

The end test strip method calls for a camera exposure at the end of the exposed roll or scenes of negative This test is then cut from the roll and developed at a predetermined time which is considered normal for correct exposures Following the development of these test strips they are then viewed and developing time determined In general most of the negative can be developed at the time regarded as normal although in some cases time changes of from one-half to several minutes from normal will be necessary

Operation of a continuous type of developing machine is comparatively simple The exposed undeveloped film is fed into the machine from a roll, after being carefully inspected for tears and other defects which may have been caused by the camera or in handling prior to leading in the magazine The film is fed on to a feed in elevator which allows approximately four minutes to make splices between each roll so that a continuous band of film will flow throught the machine to the take-off reel at the end of the drying cabinet These splices are machine-made with staples or eyelets

From the elevator the film passes into a deep type developing tank which is made of wood containing approximately 350 gallons developing solution which is circulated through the tank at a constant rate and temperature This so-called turbulation method is satisfactory in minimizing the directional effects that may be found in continuous developing machines Directional effect is the name given to a chemical reaction during the travel of the film through the developing solution It is caused by the diffusion of development products from an exposed area of the film into adjacent areas that have had different exposure This diffusion produces a pronounced lower density in the areas of film adjacent to and following areas of greater exposure or density

In most machines the rollers are of an alloy or material which will not corrode They are of the roller rack type operating parallel to the face of the film They have a tension type drive which can be driven either from the bottom or top depending upon the design of the machine

From the developing solution the film goes into a small rinse tank containing running water, the purpose of which is to wash the surplus developer from the film before entering the hypo or fixing bath which is next in line Construction of this tank is similar to that containing the developing solution, the hypo circulates and is kept at a constant temperature Following the hypo tank is that containing the water, where the hypo is washed from the emulsion This tank is divided into several sections to insure a thoroughly washed negative Between each tank mentioned is a squeegee which removes the excess solution, thus keeping the transfer of chemicals from one tank to another at a minimum

After leaving the wash tank the film goes to an elevator system between the wet section and the drying cabinets This elevator serves to take up the slack which may occur between the wet and dry ends as well as to permit the stopping of either end of the machine in the event of an emergency, such as film breakage or mechanical trouble

Then the film passes into the drying cabinets Construction and operation of the roller system in this part of the machine is similar to that mentioned in regards to the wet section with the exception that in top drive rollers it is necessary to have an elevator system to take care of the shrinkage of film through drying However in the bottom type drive of dryer this is not necessary Most laboratories have conditioned air for the drying system to permit accurate control over drying conditions. The proper drying of film is an important part in the total processing of negative The heat should be kept at a minimum temperature and the humidity regulated accurately because these factors have an important bearing upon the grain and contrast of the negative emulsion as well as an effect upon the flexibility and longevity of the celluloid itself From the drying cabinets the film is passed on to a rewind reel mounted on the end of the dryer Each roll is broken at the patch and is then ready to be broken down and assembled for the rushes

Hence, from the early beginning of the motion picture industry much progress has been made in every phase of motion picture production and the laboratories have contributed their share It seems, when we consider the finished products of the motion picture film as it is seen in the theatre today, it is fair to say that it has reached a high state of perfection However regardless of this high state of technical excellence, engineers throughout the industry are working ceaselessly to discover and perfect new methods in motion picture arts and science

TRADEWINDS



Lighting effect secured with one midget flash bulb in the Spot Flash adapter on the camera and one midget bulb in Spot Flash Sidelight Camera 6 ft., exposure f16, 1/200th second

Flash Photo Spot Light

● Hunter & Co., manufacturers of the Spot Flash adapter for the new midget flash bulbs announce the Spot Flash sidelite for creating illustrative lighting effects in flash photography

Like the Spot Flash adapter, the new side lighting unit, which has a spring clamp for attachment in any convenient location is a focused reflector producing a narrow beam for spot light effects and a wider beam for flood lighting. The flood beam is obtained by inserting a diffusing ring in the basic reflector. Without the diffusing ring the Spot Flash sidelite becomes a powerful soft edged spot light. The unit has a sight for alignment on the subject.

In making illustrative multi flash photographs this new unit can be used with standard synchronizer equipment or in conjunction with the Spot Flash adapter. The technique is simplified by using a Spot Flash adapter on the camera with diffusing ring and placing the side light used as a spot light without diffusing ring at an equal distance from the subject.

Exposure is calculated exactly as when using Spot Flash adapter alone on the camera and the result is action flash illustrations with lighting effects ordinarily achieved only by studio lighting.

Scheibe's Monotone Filter

● Difficulties in correctly appraising how a subject or scene will be reproduced photographically are largely removed by using a Monotone Filter to view the scene before making the exposure, it is stated by George H. Scheibe, originator of effect filters.

By translating color and other values into monotones, it is easier to determine how straight light, cross or back light will show up in the finished negative. In *motion pictures the filter is used in the* focusing mount of the camera. It reveals how makeup will photograph and correctly indicates how every shade of color in costumes or sets will appear in black and white.

For the studio transparency department its value is said to be of paramount importance in showing whether the background is too light or too dark. The Monotone Filter *is utilized for all branches of* photography, including commercial and portrait but is strictly a "viewing" filter. Prices are 1 in. round, $2.50, filter 2x2, $3.50, Monocle $5.

Filmo Projection Lens

● Following closely on the heels of the faster 3 inch projection lens announced a few months ago by Bell & Howell a similar increase in light transmission is introduced



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in a still longer lens—the new fast 3¹ in f2 3 len. for Filmo 16 mm projectors.

For very long throws wherein it is physically impossible to place the projector close enough to the screen to obtain the right size picture with the standard lens the new 3¹ -inch lens is said to be ideal It transmits a full 37 per cent more light than its predecessor of the same length, yet it does not sacrifice definition or sharpness.

The 3½-inch lens will produce the same size picture at a distance of 64 feet that the standard 2 inch lens will at about 37 feet, it is stated

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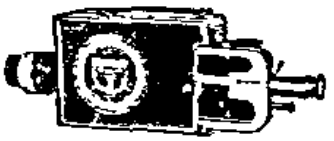
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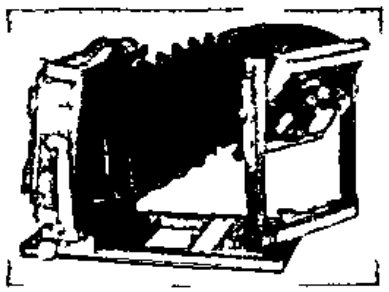
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Watson Portrait Camera

● Completely modernized, the Watson 5x7 Portrait Camera, adjustable with reducing backs from sizes of $2^1/_4$x$3^1/_4$ to 5x7, offers home portrait fan. studio and commer cial operators a remarkable value for only $29 50 according to an announcement just released from Burke & James, Inc

Among the new features are tilting and swinging lens board and front, vertical



and horizontal swing back, rising front board and sliding front, and all metal slide. Thus the Watson Portrait Camera becomes an instrument of great versatility suitable for photos of dinner or dance groups, long street scenes, tall buildings and distortion correction in general, as well as all of the commoner portrait uses.

For reducing perspective in street scenes, groups, etc., and reducing body propor tions in portraiture, the vertical and hori zontal swing back will be found a great convenience A quick change-over from vertical to horizontal pictures is provided by the reversible back

A full length slide locks the camera in normal position and the rising front board and sliding front permit centering the image without tilting or turning the camera There is a 14-inch flexible bellows for easy adjust ment

For further information on the Watson Portrait Camera its big brother—the Com mercial View Camera with 24-inch bellows, or any of the Watson accessories write to Burke & James, Inc., 223 W Madison St., Chicago

Low priced 8 mm Film

● A new Agfa Film, named Twin Eight Panchromatic Reversible is now available for amateur photographers using double width 8mm motion picture cameras. Of special interest to those requiring maxi mum film economy the new Agfa film per mits savings in film costs, selling at the list price of $3 per 25 foot roll, wh ch in

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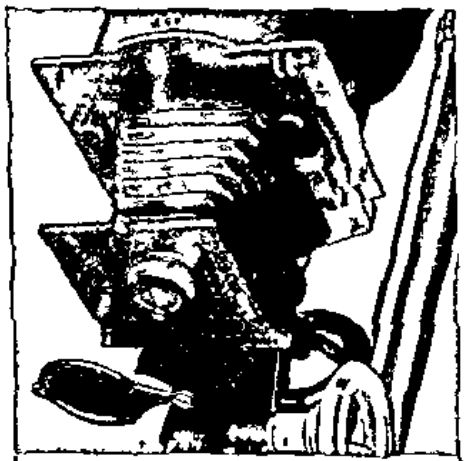
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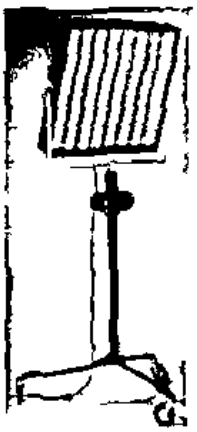
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cludes processing at any authorized Agfa Ansco Reversal Laboratory It is slightly slower than the fast Twin Eight Hypan Reversible introduced a short time ago It is, however, similar in other characteristics, providing a high-quality, panchromatic emulsion brilliant gradation fine grain and high resolving power, Agfa states

Fluorescent Light

Bardwell & McAlister, Inc., of Hollywood California have announced the "Fluor-O Photo — eight tube fluorescent light Type 15



The "Fluor O Photo has been tested and approved by lighting engineers and practical photographers Its superiority is due to the shape and construction of the reflectors. Normal height range 5 feet to 9 feet A special counter balance stand makes it very easy to raise or lower the light to any desired height

Accessories available for this unit include a low arm adapter called the "Knee Bracket With this accessory the light may be operated from a range of as low as two feet to the height of five feet Wing shades, mounted on the sides are also available

The "Fluor O Photo" is engineered with the same thoroughness as are all Bardwell & McAlister products—which include the Baby Keg Lite Focus Spot Attachment and Dinky Inkie spotlight which are distributed by all Eastman Kodak Stores

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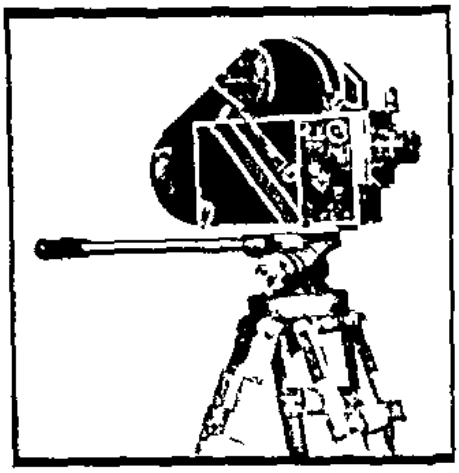
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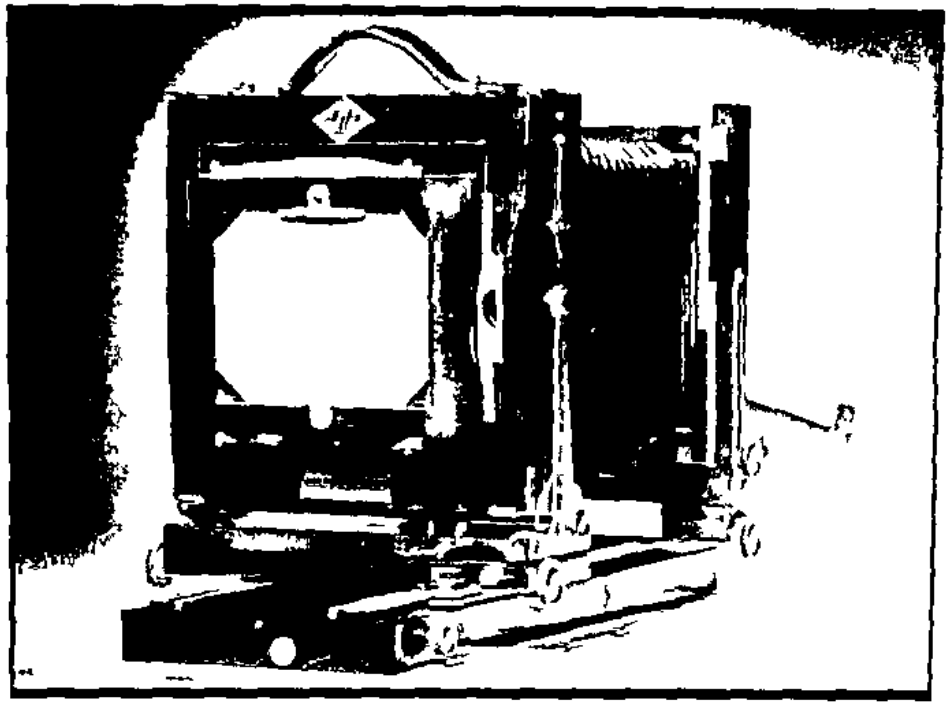
Heavy Duty Tripod

● The Camera Equipment Company states that its newest heavy duty semi professional tripod designed for use with all 16 mm cameras and 35 mm professional types such as Eyemo and DeVry has been acclaimed by all who have used it

Features include a wide flanged base to assure steady panning pin and trunnion of the tilt mechanism of extra large size facilitating smooth tilting and with minimum wear Removable guide handle screws



into a socket of base when not in use Wooden legs locked by a quick set handle extend the tripod to 86½ inches with legs spread in normal position closing to 16 inches Top plate is 3¼ x 6 inches fitted with standard ¼ inch No 20 thumb screw Rugged and steady, the tripod will support without vibration cameras like the Cine Kodak Special operated with interlock motors Prices and technical data supplied on request by Camera Equipment Company 1600 Broadway New York City



Agfa Ansco now offers a special model of the 5x7 inch Universal View Camera equipped with a 4x5 inch back It may be secured also with both the regular 5x7 inch and a 4x5 inch reducing back This equipment provides the full versatility and flexibility of the larger model and at the same time adapts it to the more economical small film size List price is $72 or with both size backs $86

Finopan Film Improvements

● A new improved type of Agfa Finopan incorporating definite advantages over the film previously supplied is now available and being distributed through regular photographic dealers The new film, which is being supplied in the same cartons as the older type is identified by the words New Improved Type appearing on the outside of the carton

Chief among the advantages brought by the new Finopan emulsion is a measurably finer grain structure which aids in giving negatives capable of great enlargement with remarkable detail and absence of grain Coincident with this improvement the inherent gradation of the New Type Finopan is slightly softer—a feature that is particularly suitable for enlarging purposes Although no change will be made in the speed ratings shown for Finopan in the Agfa Comparative Speed Rating List it has been found possible to incorporate a somewhat greater reserve speed in the product on of this new emulsion type

The developing time for New Type Finopan is 30 per cent longer than that used for the Finopan previously supplied This increase in development should be remembered by photographers who have been using the old type Finopan and who might otherwise unintentionally under develop the new film when first using it The recommended developing time for the New Type Finopan in Agfa 17 is 9 12 minutes at 65 degrees F

The new type emulsion is being supplied in all 35mm miniature sizes (20 exposure and 36-exposure Leica cartridges 36-exposure Contax spools 24 exposure Memo cartridges and 27½ 55 and 100 foot bulk lengths) and in popular roll film sizes

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PATENTS

By ROBERT W. FULWIDER

Patent Attorney, Los Angeles

No 2,206,032—Film Magazine and Apparatus for Use Therewith Warren *Dunham Foster* Ridgewood, N J Appln Aug 26 1933 In Great Britain Aug 26 1937 31 claims.

A film magazine for use in motion picture apparatus with means for locking the film reel against unwanted movement

No 2,206,054—Method of Forming Color Screens. *Virgil B Sease*, assignor to Du Pont Film Mfg Corp Appln Jan 25 1939 4 claims

A method of forming a color screen for films by intermittently shining an image of a narrow slit on a continuously moving film, developing and coloring the exposed areas, and repeating the process at a different angle for a different color

No 2,206,192—Control Device for Camera and Sound Recorder. *Burchell M Johnson* No Sudbury Mass., assignor of one half to *P Howard* Worcester Mass Appln Jan 9 1939 1 claim

A base for a spring driven movie camera which has a switch member adapted simultaneously to close the circuit of a sound recording motor and to actuate spring motor control

No 2,206,333 — Motion Picture Film Printer *Benjamin Christian Robertson* assignor to Twentieth Century Fox Film Corp Appln July 11 1938 9 claims

A film printer having an aperture gate spaced from the printing aperture and provided with air ports so that compressed air may be directed against the film and allowed to escape between the gate and the film

No 2,206,572 — Photographic Toning with Ferricyanides. *Roy H Landis*, assignor to American Cyanamid Co Appln Dec 13, 1933 2 claims.

A method of toning photographic images by treating them in a solution containing impure sodium ferricyanide contaminated with sodium chloride and ferricyanide but substantially free from ferrocyanide

No 2,206,760 — Method of Producing Animated Pictures *Douglass Crockwell Glens Falls N Y 6 claims Appln Aug 26 1937*

A method of producing animated pictures by applying a slow drying opaque paint to a transparent sheet, photographing it, and then manipulating the paint while it is still plastic to produce a slightly different picture and photographing it.

No 2,206,903—Picture Projector. *Byron C Haskin* assignor to Warner Bros Pictures Inc. Original appln April 11, 1933 Divided and this application Oct 8 1938 4 claims.

A motion picture projector in which the objective lens is supported independently of the housing and the housing may be moved about an axis passing through the film gate, and may be moved toward or away from the lens.

No 2,207,050—Variable Diffusion Mechanism for Cameras. *Geo T Clemens* Los Angeles Calif Appln June 8, 1938 5 claims.

A shutter for a motion picture camera, having an opaque leaf and a diffusing leaf which may be adjusted to overlap a greater or lesser amount.

No 2,207,103—Apparatus for Printing Motion Picture Films *Frederick T O Grady*, Flushing N Y Appln Nov 1, 1937 7 claims

A projection printer for printing pictures from negative films upon different portions of the individual picture areas of a positive film

No 2,207,293 — Means for Producing Noiseless Film Splices *Earl Jordan Lytle* assignor to Twentieth Century Fox Film Corp *Appln Feb 1, 1933.* 11 claims.

A continuous printer having a shutter and a light source so arranged as to progressively intercept the light, and reciprocate by the *passing of a splice past a predetermined* point on the printer

No 2,207,375—Photographic Measuring and Calculating Scale. *Philip A Fried ell* Oakland, Calif Appln Aug 19, 1939 17 claims.

A photographic scale having a tone scale a series of numbers for identifying the tones indexes for indicating the tonal ranges of various materials, so as to permit the securing of a desired tonal range

No 2,207,483—Stereoscopic Apparatus. *Alfred Hennicke* and *Hugo Bossel* Hamburg Altona Germany Appln Nov 3 1938. *In Germany Feb 10 1938.* 5 claims

A combined stereoscopic camera and viewer, comprising a hollow body, and a pair of lenses adapted for both photographing and viewing carried by said body

No 2,207,631 — Method of Producing Color Selection Pictures from Multi Color Master Images. *Paul Goldfinger* Belgium assignor to Bela Gaspar Brussels, Belgium *Appln Aug 13,* 1937 In Great Britain Aug 20 1936. 13 claims

A method of reproducing from a multicolor master image in which a plurality of different aspects of an object are recorded by differently colored images occupying the same picture area

No 2,207,835 — Projection Screen *Thomas W Sukumlyn* Los Angeles, Calif Appln. Dec 27 1937 6 claims.

A translucent projection screen adapted to be exposed to light on one side and viewed from the other side and having a series of lenticulations on one side so that light is confined and spread substantially uniformly within the angle of vision

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16mm. department

By FRED GATELY

Last month's announcement that International Photographer will carry a department devoted entirely to 16mm will undoubtedly pose the question Professional or Amateur? The answer is that since the 16mm field encompasses both we will endeavor to present features that will be of interest to both Because of the physical nature of 35mm equipment the amateur in this field is almost non-existent This situation does not obtain in the sub standard field where we have professional producers utilizing this medium in the commercial educational and industrial production and the amateur who does it just because he loves it and who would find the standard logically unsuited to his needs as a hobbyist just as the amateur pilot would not fly a transport airliner in his leisure hours to amuse himself

Both of these fields have their individual problems and both of them have a different approach The professional must work under pressure of time since time is money Frequently the difference between making and losing money on a particular job resolves itself down to being able to do it in a given amount of time In almost all commercial production the time factor is important in determining how profitable the job will be allotments of time for production being proportionate with the monetary aspects of the picture Under these conditions the mechanical aspects of the 16mm medium must represent *known quantities* These mechanical aspects must be so routinized—rather, systematized—so that a minimum of time is expended in their execution Frequently ideas of genuine merit must be passed up solely because to deviate from a definite routine of production to any great degree could result in a time loss so great as to make the picture a financial failure

To this group we will attempt to pass on information geared to a production tempo While it may have some appeal to the amateur because from it he may be able to glean an idea that he will be able to adapt to his needs its essential value will lie in the professional field whether that person does his original photography on 35mm and reduces to 16 or does his work on 16 direct Equipment ideas methods etc that in the work world are sometimes tried as an experiment are often too new or untried to be adapted to production in the 16mm field so articles by leading authorities in the various phases of this medium and news of happenings will be the order of the day

The amateur generally doesn't have to worry about the amount of time a particular operation takes him in his avocation his limiting factor being the amount of money he can spend on equipment and film What the professional would deem a necessity because of its time saving characteristics even though it have a fairly high original outlay, the amateur would consider a luxury and would do without provided he could accomplish its purpose by a devious method even though it took considerably longer Not hemmed in by production requirements time allotments within which to finish a picture in fact schedules of various natures the amateur can experiment play around and do things that would be entirely impractical to the professional At this point it should be pointed out that many of the good ideas present in professional fields everywhere are the result of this characteristic of the hobbyist

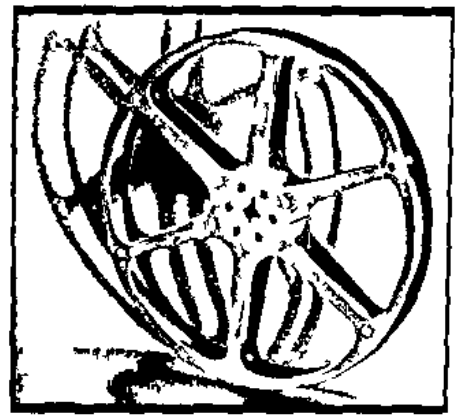
To this group we will attempt to pass on *ideas* geared to the hobbyist tempo bearing in mind that the amateur varies from the raw beginner whose enthusiasm exceeds by far his ability to the seasoned expert who is capable of really fine work To them articles will be presented that will vary from how it is and why to from the amateur's point of view how to do it better —or perhaps how to do it differently Questions are invited and both the questions and answers will be printed in this department If you as an amateur have done something that you think other amateurs will be interested in knowing about you are invited to write us about it and should it prove to be of interest to others it will be printed

A feature we will endeavor to incorporate will be the news and activities of the various clubs throughout the country While this aspect has not reached the stage where we can make any definite announcements as yet it is something we are trying to accomplish Should your club like to cooperate in this feature you are invited to address this department telling us so

Another feature this department will attempt to work out will be that of Print Criticism" But more of this too next month Meanwhile let us hear from you

New B&H 400 foot, 16mm Steel Reel

● Completing the Filmo line of 16 mm steel reels the 400 foot capacity unit has just been announced For some time Bell &



Howell has made its 800, 1200- and 1600 foot reels of spring steel while the 400 foot reel was of aluminum The spring steel flanges are said to be rigid enough to hold the film in perfect alignment yet to be so resilient that they will not take an out of position set The flanges are precision aligned and they stay aligned says B&H—no uneven wobble on projector or rewind

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No 2 207 916—Production of Photographic Color Sound Films *John Eggert Gerd Heymer Kreis Bitterfeld* and *Werner Schultze* Germany assignors to General Aniline & Film Corp Appln June 19 1937 In Germany Aug 14 1936 1 claim

A process of producing subtractive color pictures with a sound track in which the sound track is changed to a ferric ferrocyanide image, the dyestuff bleached out and the superfluous silver removed.

No 2 208 403—Camera Focusing Apparatus *Armstead Cory Winchester* assignor to R K O Corp Appln Nov 19 1938 4 claims

A device for changing the focus of a motion picture camera as the dolly is moved toward or away from the subject

No 2 209 582—Optical Film Printing *Ernest Ross* assignor to Radio Corp of America Appln May 26 1936 6 claims

A printer in which film pulled drums and flywheels are connected to the film advancing means when the latter is accelerating and are disconnected when a uniform speed of the flywheels is obtained

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Vol. XII October, 1940 No. 9

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Editor HERBERT ALEEN
Business Manager HELEN BOYCE. *Art Editor* JOHN CORYDON BELL.
Contributing Editors D K ALLISON GEORGE BURRELL J N A HAWKINS ROMAN FREULICH ERNEST BACHRACH ALVIN WYCKOFF WILLIAM V DRAPER, FRED CATLEY GEORGE SCHEIBE

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BROWN CALDWELL

On the Cover

This shot showing most of the camera crew on "Arizona" Columbia picture was made with delayed shutter action by Irving Lippman Shown starting at top reading left to right are James Gost Lee Harris Harry Osborne Ed Jones Paul Calle Ralph Ash Bob Quirk James Knott Sam Nelson Emil Harris Bernie Moore Fayte Browne Harry Hallenberger Guy Wilkerson Royal Ballet Art Lane Seated in front are Wesley Ruggles director Irving Lippman still man and Sam Nelson director of second unit Joseph Walker Harry Hallenberger and Fayte Browne received screen credit For scenes from this production see pages 12 13 14 and 15

Before we go further—our apologies to Sherman Clark who shot the stills on pages 20 and 21 September issue When the Daltons Rode Through an error they were credited to Ed Jones

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PAT O'BRIEN square jawed star of the films will receive the Helms Athletic Foundation trophy given annually to the person who has contributed most to perpetuate the amateur athletic ideal William E. Schroeder managing director of the Foundation announced that O'Brien was chosen in recognition of his noteworthy performance in the title role of Warner Bros. picture "Knute Rockne—All American. Here he is shown made up as the famous coach looked in 1910 beside the bust of Rockne in the Knute K. Rockne Memorial at Notre Dame. Photo by Schuyler Crail

"ARIZONA"

★ **Adobe city of Arizona rebuilt as it appeared in 1860, to be presented to Pima County as a state park. Hidden within its walls was complete Hollywood film studio even to blacksmith and carpenter shops.**

A crew of 29 cameramen and assistants spent more than four months filming "Arizona," the most ambitious motion picture ever produced by Columbia Pictures.

Those who manned the cameras as first cameramen were Joe Walker, Harry Hallenberger and Fayte Browne. Walker started out with the first unit but, after two weeks, illness compelled him to return to Hollywood, later to film all the interiors and the Jean Arthur closeups.

Hallenberger supplanted Walker as first with the first unit, and Browne succeeded Hallenberger as first with the second unit. Second cameramen on both units included Victor Schurich, George Kelley, Jimmy Knott, Guy Wilky, Allan Jones, Art Lane, Lee Davis and Buddy Harris.

Assistant cameramen were Bill Jolley, Paul Cable, Jimmy Goss, Roy Balbutt, Walter Lackey, Sam Rosen, Bob Quirk, Bernie Moore, Ralph Ash, Joe Marquette, Rod Tolmie and Tom Jackson.

Completing the large crew were Elmer Dyer, Akeley; Bob Wright, glass shots, Albert Simpson, Cosgrove shots, Andre Barlettier, backgrounds; John Durst, camera machinist, and Joe Citron, loader.

The task of making the stills fell to Irving Lippman who worked with Wesley Ruggles and the first unit and Harry Osborne who alternated between the second unit and the first. These two members of Local 659 shot between six thousand nine hundred and seven thousand negatives with the bulk being charged to Lippman.

Whitey Schafer made ten trips to the Tucson location to make advertising and poster art as well as Kodachromes.

Although "Arizona" was adapted from Clarence Budington Kelland's historical novel, also serialized in the Saturday Evening Post, Claude Binyon, scenarist and Wesley Ruggles, producer-director, spent more than a year in additional research.

As an authentic setting for the picture Columbia Pictures rebuilt on a square mile, cactus studded lease in Tucson Mountain Park, 14 miles east of Tucson, Ariz., the adobe city of Tucson as it was in 1860. For the lease Columbia paid $10 a year but also drilled a water well for a nearby children's preventorium, presented the institution with a check for $600 and agreed to drill and present other water wells and the permanent adobe city to Pima County as a state park after the release of "Arizona."

The set included 130 permanent adobe buildings on 11 winding streets including a mission, stage depot, general stores, cantinas, saloons, cafes, candlemakers' shops, Mexican homes, an Indian village and a main plaza.

A river 750 feet long and 30 feet wide, paved with asphalt to prevent water waste, was built, with storage dams and pumping plants to enable the river to do "retakes" because of desert water shortage.

As Old Tucson was the only walled city in the United States, almost the entire city was surrounded by a 14 foot adobe wall, two feet thick. More than half a million adobe bricks, the biggest adobe project ever completed in the United States in modern times, 200,000 feet of lumber, 1,000 eucalyptus poles, 2,500 mesquite poles and 8,000 ocotilla plants for fences went into the construction. An army of 650 laborers, working in three shifts daily, completed the city in 10 days.

Although, outside, Old Tucson was an authentic frontier settlement of 80 years ago, within the walls of the buildings was hidden a complete 1940 Hollywood film studio with camera dark rooms, administration offices, sound stages, makeup and wardrobe departments, electrical paint and grip shops, dressing rooms, lab rooms, hospital, arsenal, gun shop, blacksmith and carpenter shops, construction department and modern lavatories.

Besides Jean Arthur in the starring role, William Holden, Warren William and Porter Hall, the cast included 116 speaking roles and more than 1,200 Tucson citizens in the roles of extras. During the four months of shooting and many weeks prior, Columbia also employed more than 1,000 more Tucsonians in various labor capacities and 150 Papago and Pima Indians for atmosphere and in cattle stampede and wagon train battle sequences.

In the corrals half a mile from Old Tucson were kept 600 head of cattle, 12 oxen, 10 hogs, 50 mules and burros, 35 goats and more than 500 chickens, ducks, turkeys and geese.

More than 10 Tucson stray dogs were spared death when their license fees were paid and turned loose in Old Tucson's streets for more than three months. When the location ended, Jean Arthur staged a swank dog show for the mutts, awarded ribbons and gave the dogs to anxious Tucson children, each with a 3 year license, new harness and a month's supply of dog food.

While Ruggles commanded the first unit in Old Tucson with Hallenberger behind the cameras, Sam Nelson, second unit director, and Cameraman Fayte Browne filmed, over a period of many weeks, the wagon train attacks in the desert a mile from Old Tucson and the cattle stampede in Rattlesnake Pass, 20 miles north of Tucson.

Also, besides the huge Old Tucson set, a complete ranch and 9 room adobe hacienda—with three lakes, springs, fields of grain and corrals—were constructed in the heart of the desert.

To house the huge company, Tucson's second largest hotel was taken over and business offices, camera department, cutting rooms, projection room, transportation and production offices and a second hospital were installed.

The city's largest armory was converted into makeup, hairdress and wardrobe departments so efficient that 1,000 extras could be handled hourly.

More than 125 obsolete vehicles of 1860—covered wagons, ox trains, conestogas, carretas, victorias, etc.,—were gathered from all sections of Arizona.

The transportation problem was one of the biggest ever launched away from Hollywood with more than 75 pieces of rolling stock to convey players, workers and equipment.

During the months of May and June the heat became so intense that Ruggles established a compulsory two hour siesta period during which every member of the company was ordered to sleep and rest.

The Old Tucson location was the first film location in screen history to be awarded a United States Postoffice which, with Ruggles as postmaster at $1 a year, handled 21,000 pieces of philatelic mail on the opening day.

During the three months location, Columbia's publicity department revived the Weekly Arizonian, the state's first paper, published it weekly and sent it through the Old Tucson postoffice to 2,500 motion picture editors and exhibitors.

Every bullet fired in the picture was manufactured in Columbia's own arsenal on the Old Tucson set including linen bullets. When Ruggles demanded that gun

(Continued on page 7)









DEANNA DURBIN in SPRING PARADE Universal production

Marika (Deanna Durbin) goes to the fair to sell a goat, wins a wager that she will be able to stand up under the terrific tempo of the wild country dance falls asleep on a load of hay and wakes up in Vienna where she becomes part of a bakery establishment owned by Laci Teschek (S Z Sakall) Here she meets and falls in love with Corporal



Harry Marsten (Robert Cummings) who composes a waltz that is a sensation Harry is arrested for being away without leave and Marika intercedes with the emperor (Henry Stephenson) who makes arrangements for Harry's waltz to be played at the great ball And Marika helping Lacy cater sees Harry in the position of honor conducting the orchestra and playing their waltz Stills by Roman Freulich

historical shorts

★ **Warner Bros.' featurets in Technicolor present highlights in nation's history**



Harry M Warner standing between the 1940 Commander in Chief of Veterans of Foreign Wars Otis A Brown (left) and Dr Menendez (right) the new Commander Mr Warner is wearing the Gold Medal for Citizenship presented to him by the V F W Photo by Schuyler Crail

The history of the United States contains many colorful and dramatic moments and not a few instances of splendid sacrifice and surpassing courage The most memorable of these are being filmed by Warner Bros. in a series of Technicolor shorts which present historical high spots of our nation's progress in a way that scarcely can fail to arouse patriotic fervor

They are well and sincerely made with capable casts and a complete understanding of each subject chosen Perhaps even more important is the fact that they are outstanding entertainment Each subject is a complete and thrilling story calculated to renew one's pride in his country and to remind him of the blessings of the hard earned liberties enjoyed here now as a result of the struggles of other generations and of the great men and women who carried on during the darkest chapters of our national history Included in this series are

"The Man Without a Country" adapted from Edward Everett Hale's famous story with John Litel as Philip Nolan Gloria Holden as Marion and Holmes Herbert as Aaron Burr

"The Romance of Louisiana" the story of the purchase of the great central region of what is now the United States from France with Crane Wilbur the director of all these shorts and the author of two of them playing the role of Napoleon and Orville Alderman as Thomas Jefferson

"Give Me Liberty" dramatization of the famous Patrick Henry speech which brought the state of Virginia into the Revolution with John Litel as the great southern orator

"Declaration of Independence" with John Litel in the role of Thomas Jefferson and Tod Osborne as Caesar Rodney a little known but authentic early American hero and Rosella Towne as a Revolutionary belle

All of the above were shot by Charlie Boyle first cameraman Local 659

The campus class rooms and airport at Stanford University Palo Alto California went Hollywood for the filming of "Young America Flies" photographed in Technicolor by James Van Trees first cameraman Local 659

The short feature made by special arrangement with the United States Civil Aeronautics Authority and the cooperation of that governmental agency, was filmed complete at the famous western school

Director B R "Breezy" Eason players Jean Parker William Lundigan Harry O'Neill William Orr Herbert Anderson Frank Wilcox Donald Woods and a production crew of thirty five technicians spent days on location and at Oakland during filming of the thrill production

These particular young players were chosen because all are experienced student pilots and hours of actual flying were required Cameramen, too had to be veterans in aerial photography One moment of danger and excitement not written in the script or expected by the cast or crew came one day when Bill Orr stalled his ship while a thousand feet over the Stanford Airport then had his motor go out just as he came out of a stall He brought his light ship down safely in a thrilling landing with the cameras catching every foot of it The shot stayed in the picture

Produced on a lavish scale ordinarily reserved for features of the million dollar budget class Warner Bros.' featuret. "Sons of Liberty" re-creates American history and may be said to create motion picture history

So far as records show it is the first featuret ever to be guided by a famous feature director who requested the assignment. It is also the first featuret presenting a big name star in a request role

Depicting a stirring and little known chapter of the struggle for American independence "Sons of Liberty" tells the story of Haym Salomon the patriot who saved freedom's cause when it seemed darkest by coming to General Washington's aid with money to pay his starving soldiers Based on historical fact authenticated by extensive research, it traces the activities of a patriotic organization known as Sons of Liberty of which Haym was an heroic member

Michael Curtis, who has directed such outstanding features as "Four Daughters," "Captain Blood," "Angels With Dirty Faces and "Dodge City asked to be allowed to do "Sons of Liberty" after reading the script And Claude Rains, one of the screens foremost character actors, earnestly requested the role of Haym Salomon With Rains in the stellar cast Curtiz is directing are Donald Crisp Gale Sondegaard Montague Love Ronald Reagan Henry O'Neill James Stephenson

(Continued on Page 10)

plastic matte shots

★ By J. H. BARTHOLOWSKY

(Bartholowsky is a matte shot artist, having started back in 1918 at the Lasky Studios when the old glass process was used —Editor's Note)

A plastic matte shot can be completed much sooner than an artist can paint a matte shot, due to the fact that several men can work on the former The atmosphere of a plastic matte shot can be changed without having to stop the camera or resort to any means of trick photography, for instance a cloud passing in front of the sun, or the movement of falling rain which is impossible to do with a painted matte unless the method of double exposure is resorted to

Smoking chimneys and moving tree tops will lend atmosphere to the picture In a plastic matte shot this can be done with very little extra effort on the part of the cameraman For night shots windows and street lights can readily be illuminated

Absolutely correct perspective may be secured through my Perspectograph, a machine that lays out any floor plan in perspective, giving the height, width and depth, assuring that the theatre goer will have no impression that the shot is faked Every small detail is convincing of absolute reality and the plastic shots never look painted or false Many matte shots



fail to look genuine because of wrong perspective, lighting and misconception of distance

With the plastic matte there is no frozen line with the upper part of the set appearing lifeless as is often the case in painted matte shots

The average size of the plastic matte shot is 36 by 24 inches but if necessary they may be built smaller or larger

"ARIZONA"

(Continued from page 3)

flashes be two inches longer on the film 25 000 rounds of ammunition had to be unloaded and reloaded

The company's gun shop on the set housed $10 000 worth of firearms authentic for the period The rarest gun, presented by Miss Arthur to Holden in one of the scenes is a gold plated Henry rifle valued at $1,000

To spare the feelings of descendants of Arizona's pioneers the pictures five heavies—Warren William, Porter Hall George Chandler Syd Saylor and Wade Crosby—play fictitious roles All other characters except those played by Miss Arthur and Holden are authentic figures in early Arizona history

When the big Columbia crew returned to Hollywood they brought back 350 000 feet of exposed film which has since been edited down to 12,500 feet

S M P E Convention

S M P E Convention will be held at the Hollywood Roosevelt Hotel, Hollywood October 21st to 25th Officers in charge are E A Williford President N Levinson Executive Vice President W C Kunzmann Convention Vice President J I Crabtree Editorial Vice President, L L Ryder Chairman Pacific Coast Section and H G Tasker Chairman Local Arrangements Committee

Newly developed motion picture equipment will be exhibited in the Bombay and Singapore Rooms of the hotel Those who wish to enter their equipment in this exhibit should communicate as early as possible with the general office of the Society at the Hotel Pennsylvania New York

HOW DO YOU SAY IT?

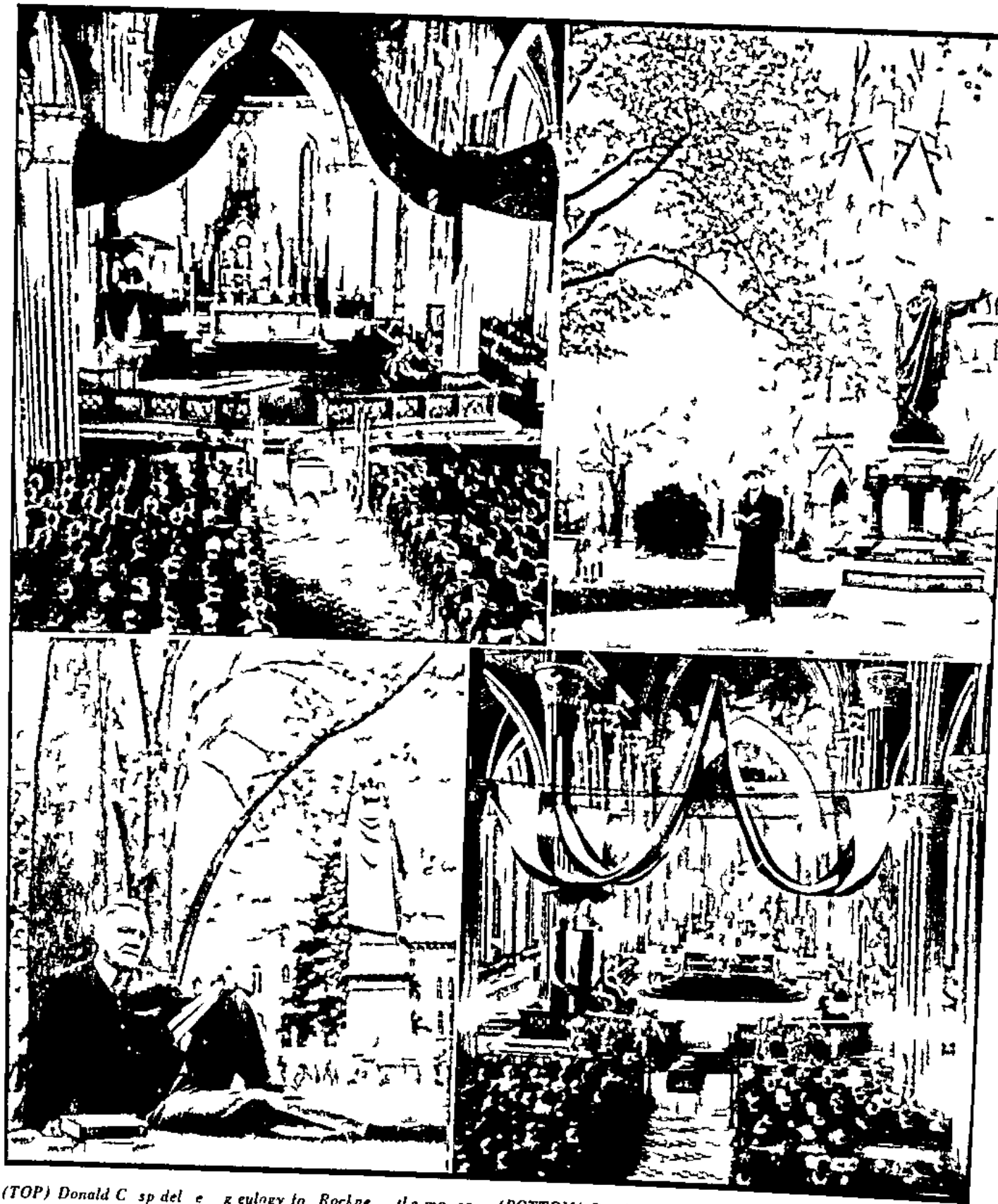
After wrangling for days over how to pronounce Los Angeles 20th Century Fox producers have agreed on a strictly Castilian pronunciation which will probably flabbergast millions of movie fans

The argument arose during the filming of 'The Californian,' a story about the Los Angeles of 1820, with most of the movie makers favoring an English pronunciation so that movie audiences would know what the hero and heroine were talking about.

Rouben Mamoulian, the director, insisted on the Castilian for the sake of accuracy 'Lows Ahn he lays" He will use a foreword and spell the name of the town out in its complete fullness—El Pueblo de Nuestra Senora la Reina de Los Angeles



CAMERA CREW SHOOTING INSIDE CHURCH AT NOTRE DAME UNIVERSITY. Reading left to right are shown Rex Wimpy first cameraman Herbert Gross electrician Howard Clan grip (kneeling on parallel) Warren Lynch operative cameraman "Chuck" Fowler assistant cameraman Burton Haskin directing action of Donald Crisp in pulpit Harold King on sound boom in background center. Standing in front of pulpit are Carlton Gibson, assistant director electrician from Chicago and Vic Johnson gaffer. Photo by Schuyler Crail



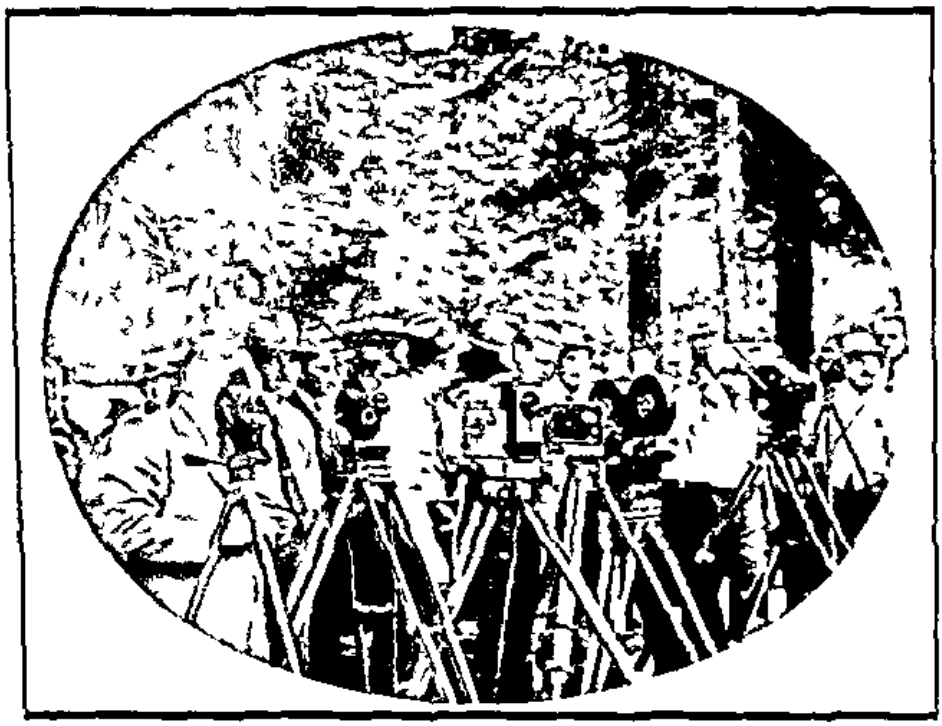
(TOP) Donald C sp del e g eulogy fo Rockne tl e mo on p cture scene of the funeral taken n the chu ch at tl e u vers ty Pat O Brien as Knu e Rockne n front of churcl on Not e Dan e campus at South Bend

(BOTTOM) Pat O B ien as K ute Rockne t hen he was a young s udent of chemistry at Not e Dame Taken on campus u uh Not e Dan e ad inist at on bu ld ng in backg ound Photo by S huyler Cra l A ne s p ctu e taken at the actual fune al of Knu e Rockne

"VACATIONING" WITH WILLKIE

★ By PAUL M KOONS

Newsreelers of the Rocky Mountain territory had anticipated a dull summer before the announcement of Wendell Willkie's Colorado vacation They were surprised that he should come here but the boys swung into action and what started out to be a short visit by the Willkie party lengthened into a five week stay



Lined up to shoot Willkie at a fish fry are Jean Dubois Universal Paul M Koons Pathe Allen Pugh News of the Day L E Orr Fox Movietone E K Edwards Paramount and Don Hooper shooting 16mm for D&RG Ry Photo by W C Cleaves

Mr Willke was always very accommodating giving us as much time as we needed to get our pictures He was jovial and good natured about the whole thing but would not agree to any pictures showing him doing anything he would not ordinarily do He liked to mingle with crowds and shake hands with people which produced material for some good shots The beautiful Broadmoor Hotel in Colorado Springs where he stayed, provided some excellent backgrounds and I believe that we did a good job (most of the time anyway) A candidate for President of these United States must be photographed if he wants to be elected

We are still amazed about the way he spent his vacation He is the type of man commonly known as a human dynamo and it seems as though he never rested On several occasions he remarked that physically he was a better man that we were because when we were worn out steaming along behind him with cameras on our backs, he would still be leading the boys a merry chase in the hot sun

Despite the difficulties encountered such as poor light and crowds following and bothering us, which was an unusual thing for the boys in this territory I am sure that everyone enjoyed working with Mr Willkie

HISTORICAL SHORTS

(Continued from Page 6)

Moron Olsen Sid Bracy and other prominent players

Filmed in Technicolor Sons of Liberty has as many settings and a far larger cast of supporting players than most full length features Among the colorful historic backgrounds presented are Germantown Pennsylvania headquarters of General Washington the New York headquarters of the British general Howe the interior of Liberty Hall in Philadelphia where the American Congress *is shown in* session and exteriors of New York and Philadelphia

Sol Polito photographed the historical featuret with Ray Rennahan acting as Technicolor associate Both are members of Local 659

The highest award of the Veterans of Foreign Wars for civilian service the Gold Medal for Citizenship" was presented to Harry M Warner president of Warner Bros Pictures at the official business section of the *national encampment* the latter part of August National Commander in Chief Otis N Brown who made the presentation said Mr Warner was honored for his long and ardent service in behalf of America's war veterans

"Mr Warner also directed the motion picture industry in cooperating with their national Americanism programs and their fight against un American forces" Commander Brown said

The gold medal citation reads for outstanding service as a citizen of the United States in sponsoring a great American program through consistent production of a series of patriotic feature pictures and short subjects, *bringing America's true* history its thrilling chapters and immortal personalities directly to the citizens of this nation

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CAMERA WORK IS ALL MONKEY BUSINESS HERE Left to right are shown Roy Ivey, assistant cameraman Fleet Southcott operative cameraman and Harry Neumann director of photography on Monogram Picture "The Ape" Still by Warner Bill Crosby

FACTS ON M. P. INDUSTRY

In the exhibition field 211 000 people are employed in the 17 003 theatres open in the United States seating 10 162 20[illegible] people The average weekly attendance at these theatres is 8[illegible]000 000 persons who contribute approximately $1,000 000 000 in yearly revenues at the box office Film rentals paid by these theatres to distributors of motion pictures average over $250 000 000 yearly

The motion picture industry is rated by many people as being among the first 10 single commodity industries of the United States It pays the Federal Government over $100 000 000 in taxes and more than $250 000 000 in taxes to State Governments Over $77 000 000 is spent yearly in advertising in newspapers and magazines in the United States and over $33 000 000 in other parts of the world

America supplies approximately 65 per cent of all the motion pictures shown in theatres throughout the world and because of their superior quality are well liked by foreign motion picture audiences and are superior revenue producers in theatres in all countries Approximately 35 per cent of all revenues received by American film producers for their products are derived from foreign markets

WHAT IS A SOUNDIE?

A Soundie is a strip of sound on film 16mm in size which plays on the Mills Panoram Movie Machine for about three minutes Eight of these soundies make up one reel and consist of approximately a thousand feet of film Patron places one or more dimes in the coin chute and the proper number of sounds each about three minutes in length, automatically play The reel has no beginning middle or end When one soundie is finished the next one is ready to play There is no rewinding at any time—no waiting

Mills Panoram Soundies are made under the direction of James Roosevelt's Globe Productions, Inc They represent a new motion picture art specialized for the first time by James Roosevelt who has been studying the special requirements for producing movies for coin operated machines The Soundie must get itself over to the public in three minutes instead of an hour or two

Mills Panoram is a coin machine It operates automatically upon the insertion of a dime in a split second it goes into action No attendant is necessary to start it stop it or see that nothing goes wrong After the patron drops his dime he has nothing more to do but view the soundies

During the course of the Soundies Premiere September 16 Mr Roosevelt made two impromptu speeches in which he said

We are happy and thrilled to present Soundies to you for the first time tonight The reel which we are now showing on the Panoram machine has eight different subjects each a separate moving picture playing for approximately three minutes The pictures are made by the same processes of creation acting direction as are required for all pictures Soundies are a new type of entertainment because they are short and varied in nature In the course of the next year we will be required to produce many hundreds of these short subjects calling on a whole new world of players writers and directors to help us I predict that the new Soundies will uncover countless new screen personalities giving opportunities for talent and genius never before used in American entertainment I consider that any movement which gives us all new pleasure and freedom from worry is indeed a worthy one







behind the scenes on "arizona"





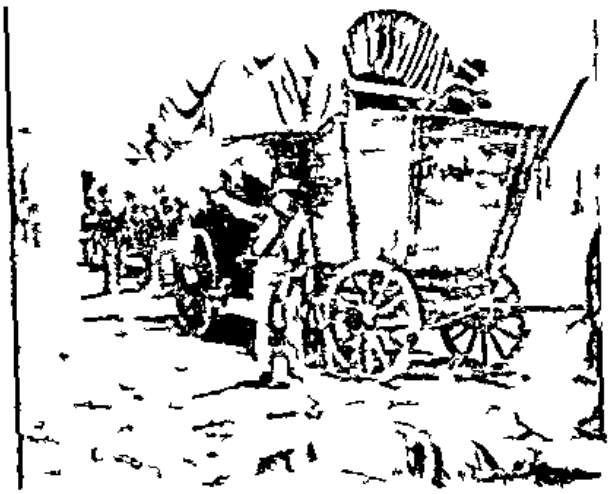
Left page sh o s Wesley Ruggles tl ee st lls of I v ng L ppman action and pa t of came a c e Victo Sch eu ch Geo ge Kelley B ll Jol ey Joe Walke Ha y Hallenberge and n J on a e T J Jackson J m Gass and G ace Dub ay sc pt g rl Abo e sh o s left to r ght W lliam Holden (photo by L A Schafer) Jean A thur W a ren Williams and Ed ar t Buc annan (pho os by I v ng L ppn an)



I o Tucson one bl stering day came young Peter Muncie leading l is i agon tra n scarred and deci ated by Indian attacks on his i ay to California.



After meet ng Phoebe Tuus l e follows her to her pie kitchen i here he tells her she d look prettier in ladies fancies but she advises him to mind his own business



Phoebe prospered i th her pies and with Solomon Warner started a freight ng business Br bed by Co teret Indians raided her first u agon train



Posing as Phoebe s friend but determined to u ipe her out of business as he i as Ward's secret partner Car teret led the to nsmen to battle the Indians



When neu s reached Phoebe that Peter u as wearing Ari ona she rode out to meet him—just as the Indians attacked and she fought side by side w th him



Peter and Phoebe drive off the Indians by stampeding the cattle From the dying chief they learn of Car teret s treachery



gers longer in Tucson ng to return some day he West

Union troops depart for the war Phoebe asks the people to remain and build an empire Jefferson Carteret acquires Phoebe's freight wagons so he may report to Larabee Ward a rival freighter and Jefferson Carteret a renegade gentleman

Apache Indian attacking Phoebe's freight wagons so he may report to Larabee Ward a rival freighter and Jefferson Carteret a renegade gentleman



came from California, and riding with the colonel whom Phoebe greets

Phoebe was now hauling army supplies Without explanation her contract was canceled She rung a confession from Ward and brandished a dollar

Peter resigns from the army to marry her But Phoebe says first he must go to Nebraska with her $15,000 and buy cattle



Phoebe were feted at their Peter said See you soon through the crowds

Through the town Peter searched for Carteret In a darkened doorway he found his enemy and when the smoke of guns lifted Carteret was dead

A happy future of love and prosperity ahead of them on their vast new ranch Phoebe whispered to Peter If this is love I'm glad I'm going to love but once

Stills by Ernest Lippman and Harry Osborne

16mm. department

Only recently have the technical advancements in the 16mm film field begun to keep abreast with its importance While amateurs have long known its economies and advantages over the standard 35mm width for their purposes and professional film producers have for many years now been reducing their standard width negatives to 16 for educational, commercial and industrial pictures there had been a dearth of equipment of sufficiently advanced design technically that was entirely out of keeping with the commercial importance the 16mm field was enjoying and which at the present time is of constantly increasing importance

Particularly noticeable was the lack of camera equipment of a design possessing the ease of operation versatility and in fact, basic fundamental requirements existing in the professional 35mm field When ground glass focusing had first been introduced it lacked the necessary feature of being able to see the whole image that would be focused on the film, thereby eliminating the possibility of lining up the scene visually Finders could not be adjusted for parallax Registering pins were a refinement that only the 35mm cameras needed! With the exception of that old timer the Model 1 of Eastman's all the cameras were spring driven limiting the amount of film that could be exposed in one take And of course the most that could be loaded into the camera at one time was the usual 100 feet of reversal film

It was just such a picture that confronted the writer when the necessity of shooting an entire commercial production on 16 arose Up until that time the entire photography had been done on 35 and reduced but in this case the picture was to be shot in Kodachrome from which prints were to be made And here is where the acquaintance with the Berndt Maurer camera was made

First, and of primary importance is the fact that the scene can be lined up visually on a ground glass—through the lens doing the actual photographic work By means of a control brought out to the rear of the camera much as the lever for racking over the standard Mitchell the entire intermittent movement mechanism is moved to the left in the camera thus placing an aperture behind which is a ground glass in the optical axis of the lens, the identical position previously occupied by the film Behind the ground glass is a mirror placed at a 45 degree angle reflecting the image into the focusing telescope which magnifies the image some eight times The eyepiece on this tube can be focused to compensate for differences found in the eyesight of different individuals This image is seen right side up Also it is impossible to forget to rack-over When the movement is racked into focusing position — the camera remains in one position at all times—the position of the shutter must be such that the open section is in front of the lens permitting the light to pass into the film At this point a "catch" will prevent the tension from pulling the movement back into photographing position This catch is released when the closed portion of the shutter is in front of the aperture Should the shutter not be rotated a turn or two to bring the movement back into photographing position when the scene is ready for the take (this releases the catch) it will automatically take place when the motor turns the camera over

Integral with the camera and independent of the visual focusing system is the finder Possessing prismatic inversion permitting the image to be viewed right side up, as in the case of the visual focusing system it has two very desirable features First, adjustable parallax and secondly, an image occupying the full size of the finder ground glass regardless whether the lens used is the wide angle or the 75mm (the six inch equivalent in 35mm work) No mattes are used except where special focal lengths are used For all the standard lengths (the wide angle 15mm the one inch and the three-inch) the correct angle of view is obtained by rotating a knob on the finder tube which in addition to focusing the image on the finder ground glass, flips up an adapting lens in the line of focus which sharpens the image for an angle of view corresponding to that of each lens The only instance where a matte was used was in the case of the one and one-half inch lens, this being the equivalent of the three inch lens on the standard cameras, but which is not included in the four lens turret of the Berndt Maurer camera In the particular camera used the author found it necessary to bring the finder image out a little farther from the camera because of the special requirements that were built into the matte-box. This was accomplished by a system of mirrors at 45 degree angles. This materially increased the parallax compensation required but was necessary to prevent the matte box from cutting into the angle view of the finder

Before leaving this end of the camera, and looking again at the film movement, we find two features of prime importance First, registering pins, an absolute necessity if steadiness in the aperture is to be maintained and secondly the entire movement may be removed from the camera for cleaning purposes One of the characteristics of 16mm negative is the inordinate amount of "pick up" present at the gate, and unless the entire mechanism can be removed from the camera and cleaned thoroughly an accumulation may result in trouble The movement must be synchronized with the shutter by lining up two markings placed at the correct points, much in the same manner of the cleck pawl type silent movement of the Bell and Howell Standard cameras

A very interesting feature was found in the magazines. Holding 400 foot rolls of the dark room loading variety they resemble the standard Mitchell in appearance as does the entire camera except for its small size The magazines however do not have belt drive being driven by a set of gears instead By this system when it is desired to reverse the camera for double exposure work dissolves, etc., it is NOT necessary to give any attention to the reversal of the film in the magazines. When the camera runs forward one set of gears is engaged when it is in reverse another

Speaking of dissolves, a dissolving shutter is incorporated Resembling the miniature shutter of the NC Mitchell for synchronizing rear projection scenes it indicates the degree opening of the shutter, whether the dissolver is in operation or whether the shutter is merely being cut down

In addition to an eight to-one crank a one-to-one shaft is provided making the camera useful for process work, animation, and stop-motion The value of this feature is increased by the fact that the camera possesses registering pins.

One unfortunate condition exists — the high quality of the sound and picture available on film from this equipment can not yet be fully reproduced since projection equipment available today has not advanced to the high state of development that this camera has Generally speaking the manufacturers of 16mm sound projectors have found themselves in a predicament because of the fact that the compensation introduced into recording amplifiers to offset attenuation due to film characteristics is not the same in 16mm as in 35mm Much greater attenuation is present in 16 In other words, if the recording amplifier were to have a perfectly flat response curve into the high fidelity range and a gain run made from a print of a negative recorded with that amplifier

the db loss would be considerably greater and occur at a lower frequency on 16 than on 35 In actual practice the recording amplifiers of both of the 35mm standard systems are peaked at the point where the film losses occur so that when a gain run is made using this amplifier the result obtained is substantially flat the peak cancelling out the loss due to film Now when a track obtained in this manner is reduced to 16 the additional loss inherent to the sub standard film becomes apparent and it is this loss that the manufacturers have had to cope with, since the bulk of the prints run on 16mm sound projectors are reductions from 35mm negatives

Manufacturers have dealt with this problem in two ways One to peak the reproducing amplifiers on their machines at a point where this additional loss on 16 occurs, and secondly to chop off the lower frequency response to give the higher frequencies in the region where the loss occurs a chance to build up in relationship to them This latter method while generally unsatisfactory and resulting in anything but a straight line response, is unfortunately rather widely used in the cheaper priced machines Here again is another instance where the technical shortcomings, lack of coordination and lack of standardization is out of keeping with the importance of this field

Reproducing a track recorded on a Berndt Maurer system where the compensation introduced is of the correct amount to take care of the losses encountered in 16mm work gives some interesting results. On reproducing amplifiers where merely the higher frequencies are peaked the resultant sound gives the impression of being too brilliant To a certain extent this may be taken care of by introducing attenuation with the tone control whereas the class of projectors falling into the second category mentioned above don't fare as well But, using the flat reproducing amplifier it was the writer's experience to feed the photo-cell output of a track recorded with the Berndt Maurer equipment to an amplifier possessing distortionless output from a pair of triodes operating in push pull and having the lows as well Results comparable to 35mm films were obtained'

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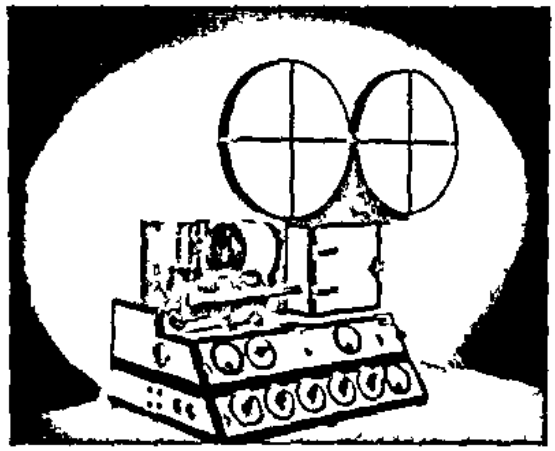
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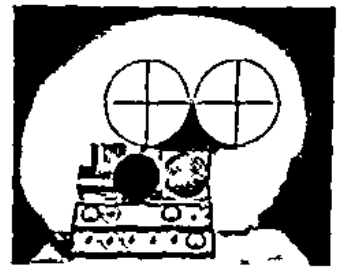
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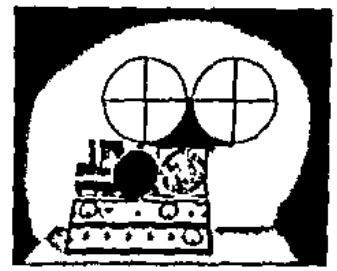
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SKINNER RECORDER







Climaxing two years of development and research the C. R Skinner Manufacturing Company has announced their new sixteen millimeter Sound on Film Recorder The new Recorder, designed two years ago was built and put into operation at that time but was withheld from the market until all the "bugs" were worked out The machine has been used for the past eighteen months in all types of production work A large number of sound tracks, both of the non synchronous and the synchronous types have been made, as well as a complete ten reel foreign language feature During this period of extensive use and test any undesirable features found to exist were eliminated with the result that a recording unit has been evolved which embodies all the features and conveniences necessary for any type of production work

To facilitate ease in handling the recorder is unit built The camera motor and amplifier are built into one compact unit as the illustration shows (Figure 1) The unit type of construction makes unnecessary the many connecting or patching cables frequently employed with recorders

The recorder produces the familiar twin wave or bilateral variable area track used in C R Skinner Manufacturing Co recorders for the past ten years The recording element in use throughout the world is a hi fidelity valve using the patented Skinner optical system It does not make use of a mirror and is so constructed that once set at the factory it remains in constant alignment both as regard to spacing and center line adjustment The optical system produces a slit of 0005 which allows a maximum recorded frequency of 8000 CPS The high optical efficiency of the system allows the exciter lamp to be burned at substantially below its rated current producing long lamp life and preventing filament sag The recording light beam is readily visible for checking at all times through a built in inspection window

The amplifier is of the highest quality with the curve adjusted to give optimum results in the sixteen millimeter field A four channel input is built in with separate controls for each channel allowing full freedom in mixing Two channels are supplied for microphone and two for phonograph An automatic volume control is part of the amplifier circuit The automatic control has been found of great value particularly in field work where re recording is not anticipated or possible as the control can be so set that a track on maximum excursion can be obtained without regard to input level and with no danger of damaging the recording element should the input pass the ordinarily safe maximum The automatic control is adjustable at the will of the operator and can be cut out completely to allow for full manual mixing if so desired

The noise reduction unit available for the recorder is applied directly to the element and is so designed that it can be operated to give a noiseless track for either reversal Kodachrome or positive negative duplication

The recording camera employs the patented single sprocket film transport used and proven successful in the Skinner 36mm Recorder By the use of this system the large single sprocket acts as feed constant speed and holdback sprocket Such construction eliminates the use and necessity for gears in the film transport mechanism and effectively eliminates any fluctuation of film motion due to gear flutter The film is scanned on a rotating drum running on precision bearings suit

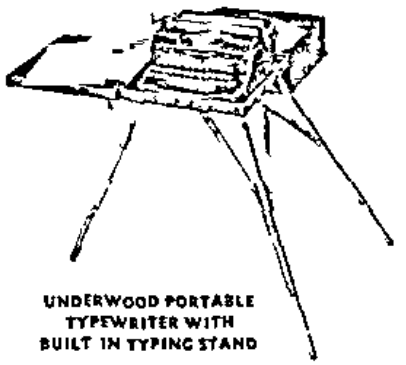
ably dampened by flywheel action The entire tran port system imparts a constant flutter free movement to the film which together with the high quality amplifier and the optical system produces sound quality closely approaching that obtainable on 35mm film

The operation of the record ng camera is possible in either direction so any system of duplication may be used Figure 2 shows the method of threading for Kodachrome or Reversal duplicat on Figure 3 shows threading for conventional Positive-negative work The recording camera is regularly supplied with a special Skinner devel ped, synchronous motor of exceptional smoothness Other types of motors, can of course be adapted

The machine is also equipped with built in footage counter, signal flash control record rehearse switch forward reverse switch and camera control switch to allow independent operation of either the camera or recorder without disconnecting cables or using a separate current supply for the camera One thousand (1000) foot or four hundred (400) foot external detachable magazines are used

Designed particularly for the use of commercial producers in the sixteen millimeter field the recorder has proven itself reliable versatile and capable of a sustained high quality heretofore rarely found in sub-standard equipment A full line of accessories are also available giving a recording unit of studio quality and convenience

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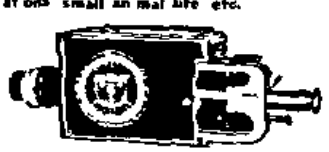
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B & H "Safe-Lock" Sprocket Guards

Of interest to all 16mm movie makers is the announcement from Bell & Howell that "Safe-lock" sprocket guards hitherto found only on Filmsound projectors, are now being built into all Filmo silent projectors

When these guards were introduced on the B&H sound machines early this year it was said that they represented the most revolutionary development in film threading procedure in many years. B&H claims that it is now impossible to thread a Filmo "Master" projector in any but the correct way The film is either correctly seated on the sprocket, with teeth engaging the perforation, or it is held fully clear of the sprocket teeth by the new guard. There, although obviously not threaded no damage can possibly result.

Further says the announcement, the guard extends over the outer edge of the film, which it is claimed prevents defective film or faulty splices from jumping the sprocket

Operation of the "safe-lock" guards is extremely simple says B&H The film is guided to its proper position by a directional sheath, the guard is snapped open and immediately closed, and the film is *threaded*

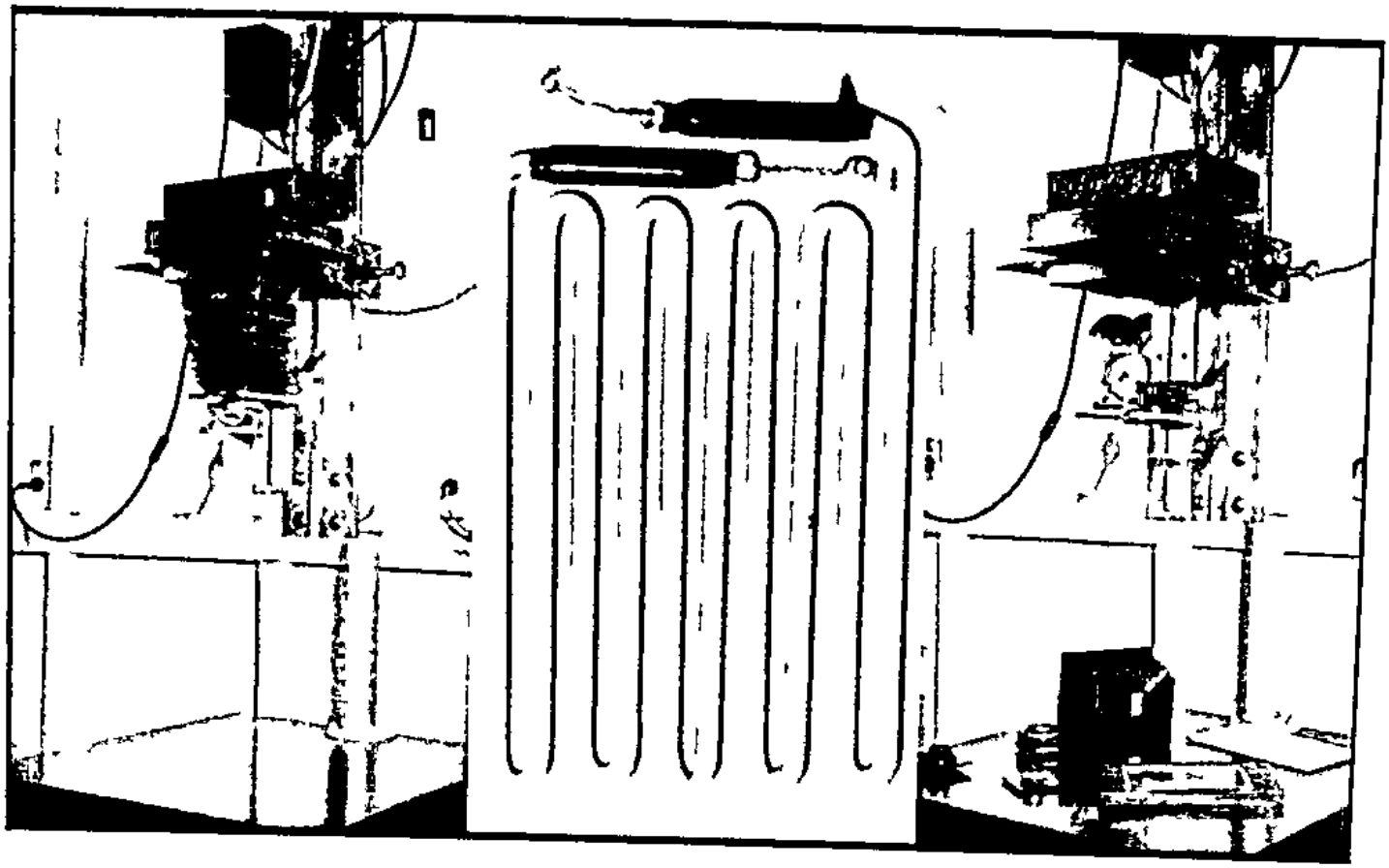
Filmo "Master" projectors retain their many other features, and prices have not been raised

For further information write to the Bell & Howell Company 1801 Larchmont Avenue Chicago Illinois

● New Filmo "AutoMaster" is said to be the first camera to combine the convenience of magazine loading with the efficiency of a 3-lens turret.

cold-light enlarger

★ By ROBERT L. BUCHHOLZ
Member Local 683



To the amateur as well as the professional photographer a good enlarger is of vital importance in photographic work. Many of us have had experience with various types of enlargers and know the qualities that a good enlarger should possess. But find the cost of such a factory built machine prohibitive.

With this in mind I set out to plan and build an enlarger which I shall endeavor to describe in the following article. In my own experience I have found the 5 x 7 to be the most practical size as it is sometimes desirable to enlarge only a portion of larger negatives.

The light source being one of the most important parts of the machine should distribute a cool even light over the entire surface of the negative. I therefore had a fluorescent grid made at a local tube-light shop (approximate cost $5). This grid is made by merely bending the tube back and forth from one end of the lamp to the other. Both ends terminating in electrodes to which the high voltage side of the transformer is attached.

The spacing of the tubes of the grid should be about 1/8". The entire grid should extend 1 inch beyond the area that the light is to cover and when in place on the enlarger the grid should be about 2 inches from the negative plane. This tube differs from the clear Argon Mercury vapor tube to the extent of giving good visibility even when the enlarging lens is stopped down.

The voltage and the milliampere rating of the transformer is determined by the size of the grid that it will activate.

The lamp house can be made of either wood or tin without giving any attention to ventilation as the temperature rise of the tube is only about 5 degrees. After experimenting with various types of reflectors I found a wrinkled piece of tinfoil to be the most suitable. The light is diffused by a piece of ground glass which is placed between the negative plane and the grid and is easily removed for cleaning from the outside of the enlarger.

The bellows was secured from an old 5 x 7 camera and was placed on a wooden frame which made it a simple matter to detach same from the enlarger for dusting. The lens boards were cut from plywood to accommodate different focal length lenses.

As the light in this machine is a cold light a 5 x 7 printing frame used without a back made an ideal negative carrier as the weight of the glass will hold the negative flat.

A vertical enlarger must be supported rigidly to prevent any vibration. This was accomplished by the use of two 2" floor flanges a 2" elbow and two lengths of 2" pipe. To this pipe assembly was fastened the hardwood column to which a steel rack was attached. A spur gear attached to the side arms of the enlarger by means of a 1/4" rod engages in this rack to facilitate the raising and lowering of the enlarger.

When the enlarger is at the desired distance from the easel it is locked in position by a knob which turns on a threaded rod and pinches the side arms to the back column. To counter balance the enlarger an ordinary sash balance was used. The photo illustrates its placement.

Focusing is achieved by the use of a piece of channel iron milled out to ac-

The "indispensable" combination: A good camera crew and

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■

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AGENCIES

Bell & Howell Ltd London, England
Claud C. Carter Sydney Australia
D Nagase & Co Ltd Osaka Japan
Motion Picture Camera Supply Co New York City
Fazalbhoy Ltd., Bombay India
H Nassibian Cairo Egypt

accommodate a 1/16 thick piece of brass which is backed up by a hardwood board slightly narrower than the brass and attached to the enlarger To this board is attached another hardwood board which is grooved out to fit around the steel rack on the back column This latter board serves as a brace for the entire focusing arrangement and slides freely up and down the back column

The raising and lowering of the channel iron is accomplished in the same manner as described for the enlarger itself

To mask off the unwanted portions of the negative I used four pieces of tin which move to the center from all four sides of the enlarger As the entire head of the enlarger is made of several layers of ply wood it is easy to rabbet-out portions to accommodate the diffusion glass, negative carrier and tin masks

I feel that a detailed drawing of this enlarger is unnecessary as the readers' requirements will vary The enlarger described is a smooth working machine and has every feature that is necessary for the making of quality prints

And so with a little effort a few dollars and the help of a few ordinary tools, any one can have an enlarger to be proud of

GRADUATED FILTERS

Graduated filters have been on the market for a long time since about 1916. They will give any effect desired which cannot be obtained with the all-over filters

The top part of your picture is always the fast part of the scene and will need toning down in many cases to quite an extent Any Scheibe Graduated Filter can be made up in one, two and three colors to suit any condition And they always work without loss of time

Films are very much faster now, so naturally the filters must be faster, too. The light colored graduated filters that were used years ago mean nothing today They may be used on Ortho film, but not on the fast Panchromatic

The combination graduated filters are much in use for night effects. Single or one-color graduated filters require no increase in exposure as the top half is only used during exposure The two and three-color graduated will require added exposure for the lower half depending upon the type of film used. With these combinations you can make night effects that really look like night with black sky and dark foreground

The neutral density filters are also made in the graduated filters in any density desired singles and doubles. Two-color neutrals are extremely popular in many cases Many effects can be obtained with these filters which would be impossible with any other filters or without filters, such as changing a young man into an old man

(Continued on page 28)

PATENTS

By ROBERT W. FULWIDER
Patent Attorney, Los Angeles

No 2 209 693—Motion Picture Apparatus. *Jacob J Leventhal* assignor to Leventhal Patents Inc, N Y Appln May 19, 1938 8 claims

A continuous motion projector for motion picture film

Reissue 21,513—Method of and Material for Indirectly Producing Color Photographs *Bela Gaspar*, Brussels Belgium Original No 1,956,017 dated Apr 24 1934 Appln for reissue Apr 18, 1936 In Germany Mar 1 1930 27 claims

A photographic material for producing colored images comprising a sensitized metallic salt emulsion and a durable leuco compound of a vat dyestuff

No 2,209 342—Selective Photographic System *Matthew H Loughridge* Bogota N J and *Robt Stuart* Forest Hills L I N Y Appln Oct 1 1937 31 claims

A printer using a negative having a plurality of groups of markings for each frame, a control film having a plurality of markings for each group registering with the markings of the film and means for projecting the displayed markings on a light responsive means which operates a printing mechanism

No 2,203 754—Multitrack Photography *John Eggert Arpad von Biehler* and *Gerd Heymer* Germany assignors to General Aniline & Film Corp Appln Dec 11 1935 In Germany Dec 13 1934 1 claim

A multipack consisting of a lenticular film in contact with a smooth film and not being separated by any filter layers the two emulsion layers being sensitized to different spectral regions

No 2 209 971—Sound Record *Gilles Holst* and *Jan Hendrick de Boer* Netherlands assignors to Hartford National Bank and Trust Company trustee Hartford Conn Original application February 13 1937 now Patent No 2 150 834 dated March 14 1939 Divided and this application January 4 1939 In Germany February 17 1936 4 claims

An optically reproducible grainless sound record comprising a support of transparent material and a sound record having photographically produced metal image portions lying both within and on said support

No 2 210 146—Color Photography *John Eggert* and *Gerd Heymer* Germany assignors to General Aniline & Film Corporation Appln July 1 1936 1936 In Germany July 2, 1935 4 claims

A *multiemulsion color film having an* intermediate layer between emulsion the intermediate layer being composed of a hydrophilic and a hydrophobic colloid so that the proper solutions will act upon the proper emulsion and none other

No 2,210 422—Film Measuring Rule or Gauge *Raymond C Mercer* Los Angeles Calif Appln February 25 1938 5 claims

A rule for measuring motion picture films having areas corresponding to frames of a film, and sprocket hole-engaging means

No 2,210 601—Lenticular Color Photography *John G Capstaff*, assignor to Eastman Kodak Company Appln August 24 1938. 7 claims

A polychromatic screen for use with lenticular film comprising five adjacent parallel filter zones of which the two outer zones are blue the center zone is red and the other two zones are green

No 2 210,905—Production of Photographic Multicolor Pictures *John Eggert* and *Gerd Heymer* Germany assignors to General Aniline & Film Corporation Appln December 2 1936 In Germany Dec 6 1935 4 claims

A process of producing a color film by exposing it to a color component negative developing it and making use of the image formed of oxidation products of the developer bleaching the silver image re-exposing the film dying the first image and toning the second silver, image

No 2 211 037—Photographic Diffusion Device. *Joseph B Walker* Los Angeles Calif Appln Jan 27, 1939 1 claim

A diffusion device including a pair of discs both provided with identical spiral grooves providing a diffusion area with means for rotating one disc with respect to the other

No 2,211,088—Camera Truck *John C Arnold* assignor to Loew's Incorporated Culver City, Calif Appln Oct 3, 1939 10 claims

A camera boom mounted on a truck which has column carrying a pivoted collar which may be raised and lowered and which carries the boom

No 2 211 218—Film Viewing Device *Ivan Serrurier*, Los Angeles Calif Appln Nov 10 1937 11 claims

A transparency viewing device in which the transparency may be enlarged and viewed directly or projected onto a screen

No 2 211 316—Removable Coating For Photographic Film *Gale F Nadeau* and *Ilfred D Slack* assignors to Eastman Kodak Company Appln May 12, 1939 11 claims

A sensitive photographic element comprising a superficial coating removable in photographic processing baths and in direct contact with said coating a water soluble salt of an ester of a sulfo aliphatic dicarboxylic acid

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TELEVISION

Report of First Convention

The First National Television Convention held in Hollywood the past month (August) was outstanding in that it was 100% in the interest of the new industry and sponsored by an organization which had been in existence only seven months.

World-wide photographic publicity was enjoyed by the Convention through the Powell Press Service national publicity agents for Los Angeles County who syndicated photos through Acme Associated International N. E. A., N. Y. Times, Wide World Photo, Fox News, Of The Day, Paramount, Pathe and Universal. Clippings have been received by Miss Shirley Thomas "Queen of Television" from over 200 newspapers and they are still coming in.

Such wide coverage was secured by the special mechanics of this particular press service which makes several original negatives of a single subject and distributes these negatives to its correspondents who in turn make as many prints from the negative as their chain of newspapers requires.

The sponsors of the convention encountered opposition to its activity from the Radio Manufacturers Association, Washington, D. C. which issued a bulletin to its members advising them that the Association's Board of Directors had not sanctioned nor approved either the proposed television convention or the television exhibition. It alleged that a request for such official R.M.A. recognition and participation was not accorded and further advised that the Board of Directors of the Institute of Radio Engineers had not seen fit to give official recognition to the Hollywood television convention or exhibition. The bulletin was released to the press. It brought vigorous denials from the sponsors of the television convention of having made any such request and demands for official retraction which were not received from either organization. Evidently those Washington people don't like Hollywood and expect us to consult them before announcing any convention or exhibition.

Due to the friction existing between newspapers and radio broadcasters, two of the large metropolitan Los Angeles newspapers closed their columns to reports of the convention. Television using radio for transmission came under the ban of these city editors. The convention was opened on Thursday A.M. August 22nd in the Florentine Room of the Roosevelt Hotel by George H. Seward, President of the sponsoring organization, the Television Engineers Institute of America. Mr. Seward said in part:

"You are here friends as pioneers of a new industry. I salute and congratulate you on behalf of the membership. You have had the initiative and have taken the time away from other possible pursuits to be present here. Evidently you see in this new industry or art of television opportunities that warrant this use of your time which after all is a major asset of many of us.

This organization is the outgrowth of another one also founded by the speaker among a group of young experimenters and students here in Hollywood of the theory and practice of television known as the Hollywood Television Society. Their association together brought encouragement through interchange of knowledge and help both scholastic and practical. They built experimental television receivers and exhibited them to each other and to the public.

Members of this organization take interest in programing studio lighting, transmission, make up and other matters necessary to produce, transmit and receive television programs. In the papers to be presented at this convention a broad scope of subjects is offered, which no doubt would not be found on the programs of radio or electrical engineers.

The holding of this convention by a new organization with limited membership has been one of extreme daring. There was neither a large number of members to put on committees, nor a large treasury to draw upon. Even the subject matter for papers had to be searched out and classified.

The idea that I as the founder would spend my time and money to set up such an organization and hold a convention during the first year of its existence did not seem to register within the bounds of sanity. Yet with the assistance of loyal friends who shared my vision of the possibilities of an individual organization for television engineers, we are here today opening this first national television convention."

The Federal government's communication department, the Federal Communication Commission was represented by Bernard H. Linden, Inspector in Charge, 11th District, Field Division, who extended greetings on behalf of the federal government. He reviewed the early development of communication in this area and read the following greetings from James Lawrence Fly, Chairman of the Federal Communications:

"I am sorry I cannot attend your First National Television Convention. I am especially regretful because I believe that in future years all of you will look back with pride to your participation in what is certain to be regarded as an event of no little significance.

Television has been having growing pains but a spirit of progress now permeates the field. On all sides a willingness has been shown to pull together to the end that a solid foundation for lasting advance may be laid. In the work of building that foundation the first task falls upon you engineers. Out of this cooperative effort in combination with the ingenuity and initiative traditional among American engineers, it is hoped the American public will soon be a position to enjoy fully this new benefit from radio, the combination of sight and sound."

Don E. Gilman, the Live vice president of the National Broadcasting Co., took time out for his duties to greet the delegates on behalf of the broadcasters and gave his version of television's future in the entertainment field. Glenn C. Middleton told of Columbia Broadcasting System interest in television. He is their television representative here on the west coast. The National Association of Manufacturers sent its representative Mr. A. J. McFadden to speak on "Your Stake in Private Enterprise." Greetings were received from Governor Culbert L. Olson, Mayor Fletcher Bowron, Supervisor John Anson Ford, and the Hollywood Chamber of Commerce.

To the professional photographer a large percentage of papers were of interest. It will be impossible to review them but space in subsequent issues may be available for this purpose. The paper by T. H. Shepherd of the Bureau of Power and Light, City of Los Angeles was particularly informative in the new field of television studio lighting.

A motion picture sound film showing advances of television from telecasting station W2XBS were shown through the courtesy of the NBC and received very favorable comment.

The Convention was under the general chairmanship of George H. Seward, President of the Television Engineers Institute of America, Inc. He has been a pioneer in radio and television for the past nine

(Continued on page 25)

TRADEWINDS

Agfa Clipper Camera

● A new, streamlined model of the Agfa Ansco Clipper Camera is now available Retaining many of the exclusive construction features that have contributed to this camera's popularity, the new Clipper incorporates refinements that enhance its appearance

A modern molded top inclosing an optical eye-level view finder is provided as standard equipment on the new Clipper Unifo Its unique, pull out front eliminates bellows and permits unusual compactness when the camera is closed Other features provided by the new Clipper model include Unifo double lens, instantaneous *and bulb exposures, shutter release guard* hinged back and easy loading arrangements, rugged all steel frame construction high operating economy (15 pictures 2 1 16 x 2¹ _ inch on PD16 size roll film) List price is $5

Modernize Early Filmosounds

● Bell & Howell announce that a 'Modernization Plan" has been evolved whereby all Filmosounds back to the first 120 A's can be modified to produce the same superior sound quality as today's machines

Developments and inventions in the field of electronics have come thick and fast and Bell & Howell now wants to make recent improvements in sound reproduction available to its early customers Filmosounds 120, 138, 130 142, and the first Filmoares may be so modernized and owners are invited to write for the Filmosound 'Conversion Booklet' for complete details Other features of today s models such as pilot light new take up assembly, silent film speed etc, are described and priced in this booklet For further particulars write to Bell & Howell Company, 1801 Larchmont Avenue Chicago Illinois

Solar Enlargers Improved

In line with their policy of constant improvement in the famous Solar line of enlargers Burke James Inc announces several new features in the Model 45 57 Studio Enlarger for 9 x 12 cm, 4 x 5 and 5 x 7 inch negatives

Chief among these is a new horizontal adjustment which permits wall or easel projection for larger "blow ups' or photo murals This adjustment is already standard on the 35mm to 2¼ x 3¼ Model 1 2 3 series

All models of the 45 57 Solar will now be furnished in gray instead of black giving the studio model an even more attractive appearance

Other features include double adjustable double-span bellows, bi plane (heat absorbing) diffusion system, rack and pinion focusing, and vibration free, rigid unit construction

New Eastman Lens

Providing great depth of field and a wide angle of view, a new 9mm f/2 7 Kodak Anastigmat accessory lens for the Magazine Cine Kodak Eight is announced from Rochester by the Eastman Kodak Company

The 9mm lens requires no separate adapter At the f/2 7 opening the depth of field extends from 1 feet to infinity, at f/8, 2 feet to infinity, at f/22, 1 foot to infinity Other openings yield intermediate depths the full series being f/22, 16 11, 8, f 6 4 and 2 7 Owing to the great depth of field focusing is unnecessary and no focusing movement is provided

At any given distance the 9mm lens includes a considerably larger field than the standard 13mm lens and the longer focus accessory for the Magazine Eight At 2 feet the 9mm lens field is 6¼ x 11 inches at 6 feet, 2 1 ' x 2 9", at 2> feet 8 9" x 11'7 ' Parallax is negligible at distances of 1 feet and beyond and calls for only a very slight allowance at closer distances

Retail price of the new 9mm f/2 7 Kodak Anastigmat Lens for the Magame Cine Kodak Eight is $27 50

Goerz Focuser

● Many movie pocket cameras, handy as they are, lack the one important feature of a precise focusing and field control The small direct view finder, with its lens axis considerably displaced from that of the photo-lens causes a parallactic difference, that is the finder does not show the same image area which the photo lens includes *This difference increases rapidly for near* by objects

Furthermore the finder in such cameras cannot 1 e used to check the exact focus of the photo lens and the user must entirely rely on the focusing scale of the lens and his ability to judge distances correctly If objects at very close distances to the camera have to be taken this difficulty of bringing the lens into sharp focus on the film also increases

(Continued on page 28)

Motion Picture Equipment

Studio and Laboratory Tested Since 1929

AUTOMATIC DEVELOPING MACHINE
COMPLETE IN EVERY DETAIL

Immediate Delivery



HOLLYWOOD USERS CAN ATTEST MACHINE'S SUPERIORITY

USERS ALL OVER THE WORLD CAN RECOMMEND THIS DEVELOPING MACHINE

THIS PRACTICAL MACHINE CAN BE USED IN ANY CLIMATE

EASILY INSTALLED—QUICK DELIVERIES

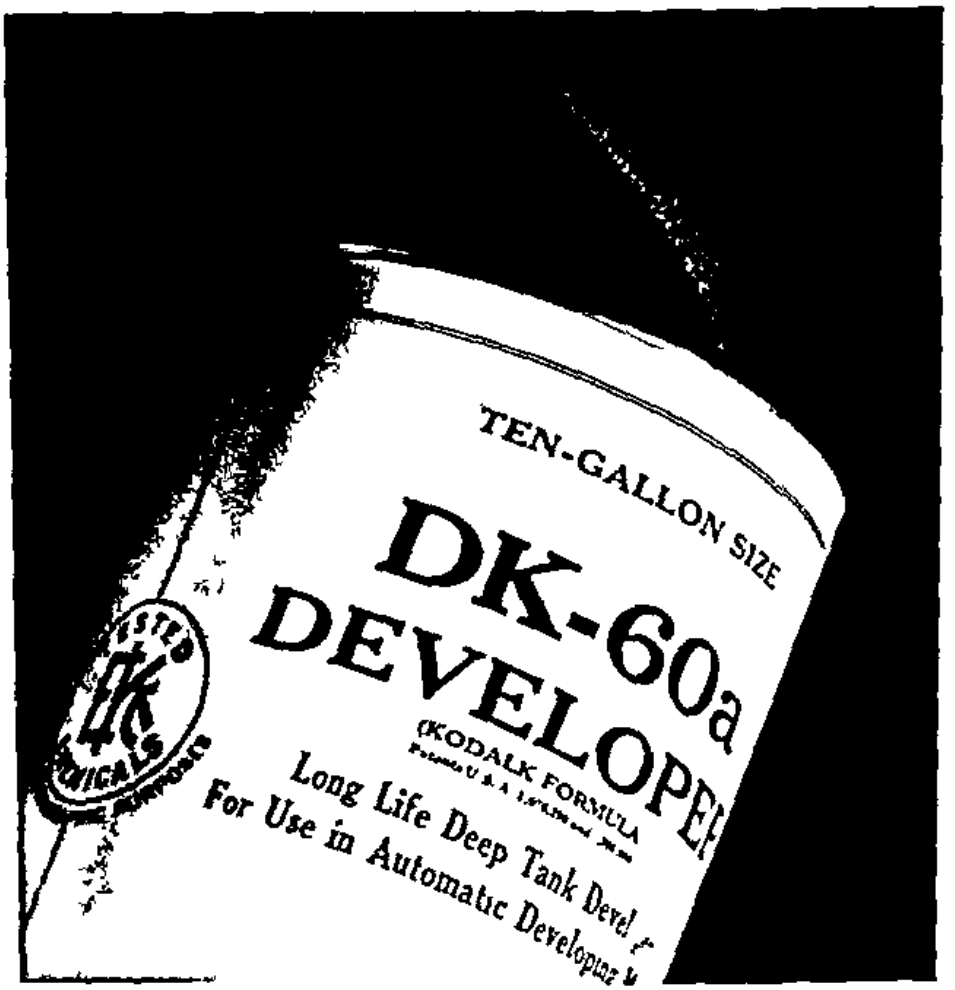
● SENSITESTER—For Light Tests and Sensitometric Strips

● SOUND RECORDING SYSTEMS

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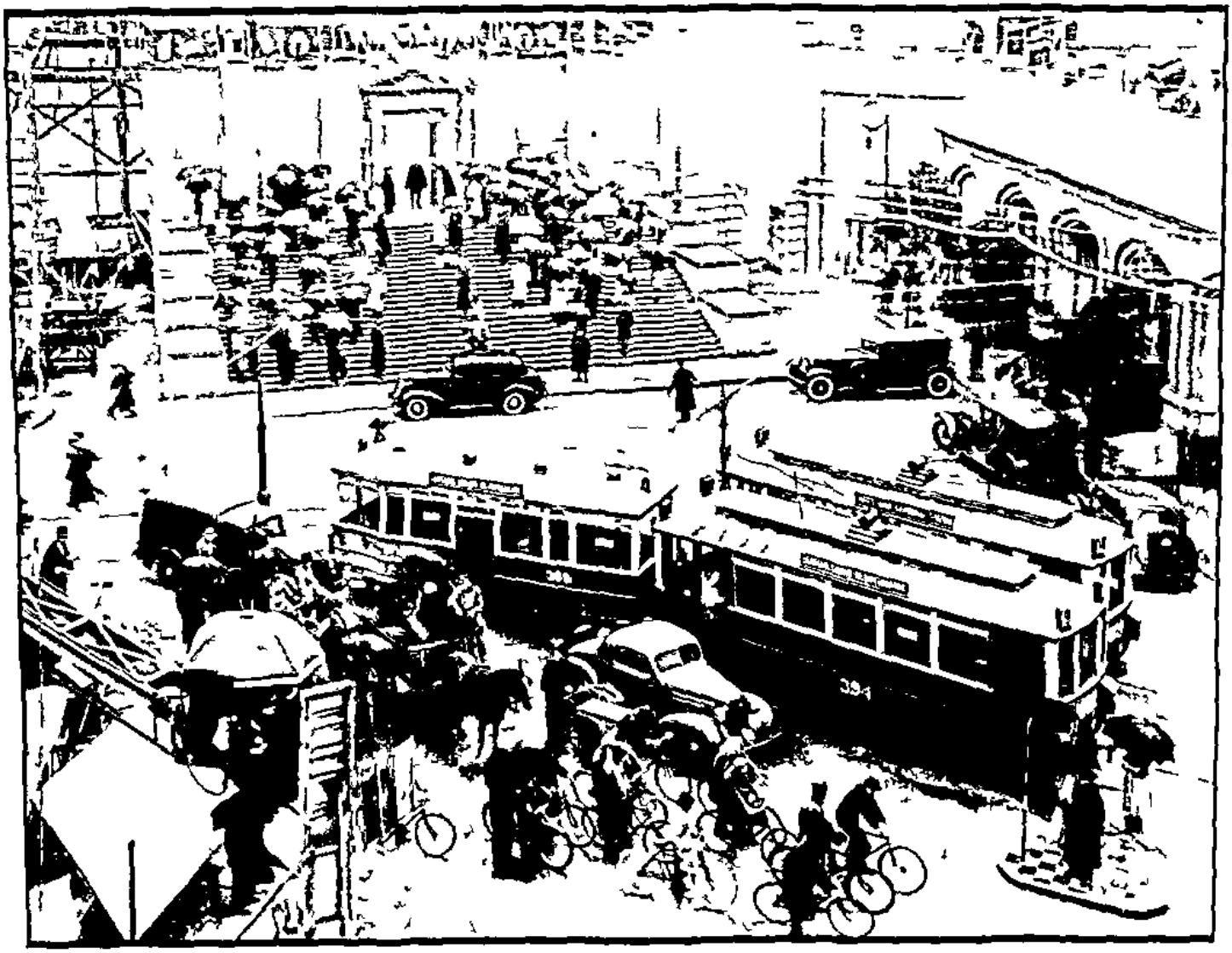
7512 Santa Monica Blvd. Hollywood, California U S A



PROTECTION PLUS

THE finest chemicals—Eastman Tested—plus accurate compounding make Eastman Prepared Developer Powders the safest, most convenient and most economical for processing of films plates, and papers Order these prepared developers—they are packed in tin and are always fresh. Eastman Kodak Company Rochester, N Y

Specify EASTMAN TESTED CHEMICALS



Scene from "Foreign Correspondent," Walter Wanger production Camera crew under umbrella in foreground Still by John Ellis

(Continued from page 22)

years and it is due to his enthusiasm for the new television industry and its possibilities that this convention was held

President Seward at the concluding business session appointed a committee to broaden the scope of activities of the Institute and to present nominations for officers and board of governors for 1941 The members of this Committee are William D Lehnke the Institute's legal counsel C Fred Wolcott Edna Williams and Shirley Thomas They are to report at the next meeting of the Institute on October 7 1940

At Golden Gate Exposition

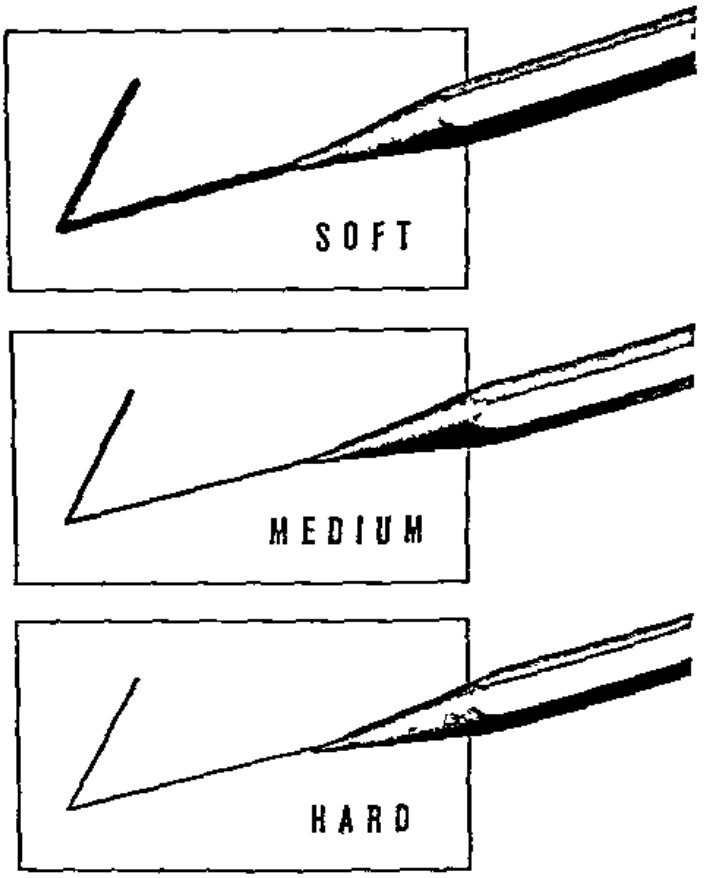
On September 7th at the Golden Gate International Exposition on Treasure Island San Francisco Bay DeForest's Day was held in honor of Dr Lee DeForest by the Veterans Wireless Operators Association Dr DeForest was acclaimed by the U S Patent Office as one of the nine greatest inventors of all times He is the holder of over 300 basic radio and television patents and has been honored by many leading societies universities and foreign governments

Among activities appearing during the day was a noon day luncheon at the St Francis Hotel when Mayor Rossi presented a key to the name of the city a gold medal was awarded by the National Officer of the V W O A and a large Scroll of Honor called a living tribute signed by all the Officers and Directors of the Los Angeles and San Francisco Chapters was presented to Dr DeForest over a coast to coast broadcast, which was attended by many of the most prominent radio executives engineers and inventors Several other events were held on the Island later in the day many of which were broadcast coast to coast In charge of the presentation of the Gold Medal and Scroll of Honor was Hal Styles President and Chairman of the Los Angeles Chapter

Ten million television receivers in American homes within 10 years is the forecast of Dr Lee DeForest whose early development of radio has resulted in 50 000 000 sets in American use American families will see complete movies and commercial sponsor strips in their own homes he said but the commercials will be more subtle and less irritating than the spoken radio sponsors messages

It is almost inevitable that the smaller theater owners will suffer from the impact *of home television but the film producers* will not" Dr DeForest said They have awakened to television and the film industry will be partly diverted to putting prepared entertainment into the home Every city of reasonable size will have its own television transmitter"

Adaptability



● The light from "National" Studio and High Intensity Carbons is as adaptable as the artist's pencils. It allows the cinematographer to use his craftsmanship to the best advantage in both color and black and white productions.

The pure white light from these carbon arc sources adapts itself admirably to all types of emulsions. Hard effects may be obtained when desired by using the concentrated brilliance of the arc to produce sharply outlined shadows. With moderate diffusion, and with the minimum use of filters, the arc, due to its even balance of colors, closely approximating daylight, will give without loss of speed a softness of tone that cannot be equaled by other light sources lacking these qualities.

The cool, quiet and efficient operation of modern carbon arc equipment adds materially to the effectiveness and economy of studio illumination.

BETTER LIGHT FOR BETTER NEGATIVES

NATIONAL TRADE-MARK **MOTION PICTURE STUDIO AND HIGH INTENSITY CARBONS**

NATIONAL CARBON COMPANY, INC.

Unit of Union Carbide and Carbon Corporation

CARBON SALES DIVISION CLEVELAND OHIO

General Offices 30 East 42nd Street, New York, N.Y.

Branch Sales Offices

New York Pittsburgh Chicago St. Louis San Francisco

NEW B&H STEP PRINTER

Insures Perfect Registration at Both 16 mm and 35 mm Ends

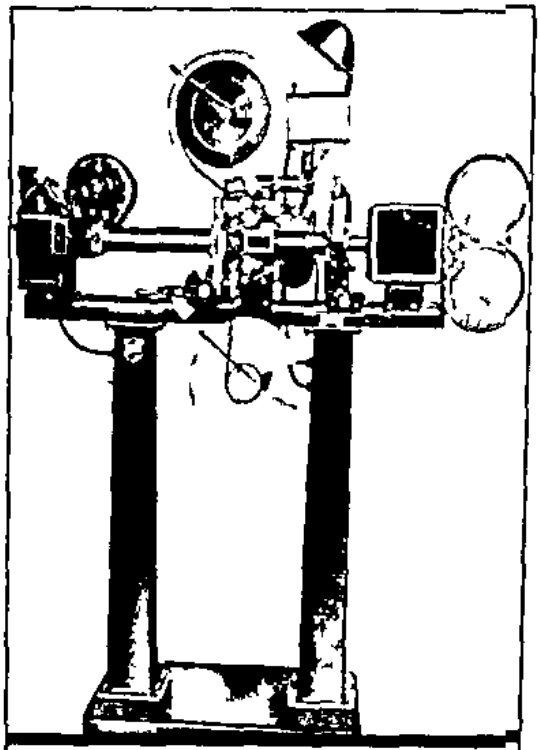
HERE is the newest Bell & Howell development for professional use the Optical Reduction Printer or Step Printer, for 35 to 16 mm Outstanding among other new features is the fact that it insures perfect registration at both the 35 and 16 mm ends. The entire machine is typical in every detail of the precision craftsmanship that has made B&H equipment famous.

The same type of fixed pilot pin mechanism as used in the standard B&H camera is used in both the 35 and 16 mm heads of this machine

Particular attention has been given to designing the optical system in order to insure greatest possible light intensity Light changes are semi automatic employing a system very similar to that used in B&H Model D Printer

All controls are convenient to the operator The whole machine is entirely gear driven the only belt used is at the 16 mm end to take up the film in the magazine

Although this new Optical Reduction Printer is primarily designed for reduction from 35 to 16 mm, additional heads for 35 to 35 mm optical printing or from 16 to 16 mm or 35 to 8, or 16 to 8 mm can be provided



New Ideas Incorporated in

MICROSOUND PRINTER

Table Type Operates Horizontally

ENTIRELY new ideas have been incorporated in this new B&H Microsound Printer It is of the table type operating horizontally and is fully automatic except for light changes

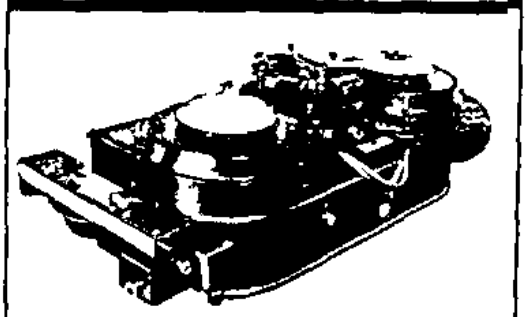
Its design insures smooth running of both films and *automatically accommodates shrinkage*

The optical system is enclosed in a unit that can be easily detached and replaced with another unit if need be The 35 mm negative is enclosed in a dustproof container and is never removed throughout the printing process no matter how many 16 mm prints are wanted

The Microsound Printer operates from left to right as well as from right to left so that only 16 mm. raw stock has to be threaded in the machine after each print has gone through

Lubrication is entirely automatic and the machine automatically stops after the printing operation for each reel is completed

Fully gear driven no belts

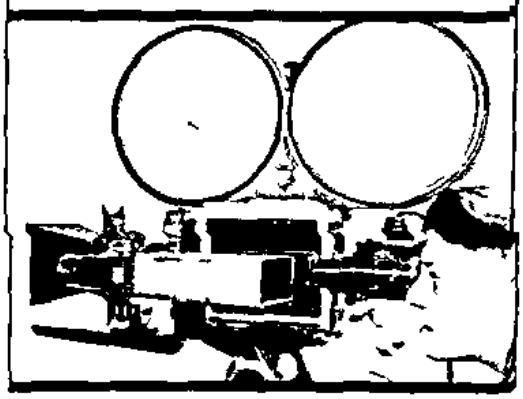


NEW ROLLING SHIFT CAMERA

Eliminates Danger of Change in Focal Distance

THIS camera may be rotated from one position to another without danger of changing the focal distance because all friction between the camera and the lens turret holder has been eliminated Exact positioning of the camera with reference to focusing and photographic apertures is insured by an automatic guiding and locking device

The focusing microscope is designed with particular attention to brilliance of the image convenient magnification and correction of aberrations Focusing is very easy



Limited space prohibits giving more than a few of the details concerning these three new machines in this advertisement. For detailed information, use the coupon Bell & Howell Company Chicago New York Hollywood London *Established 1907*

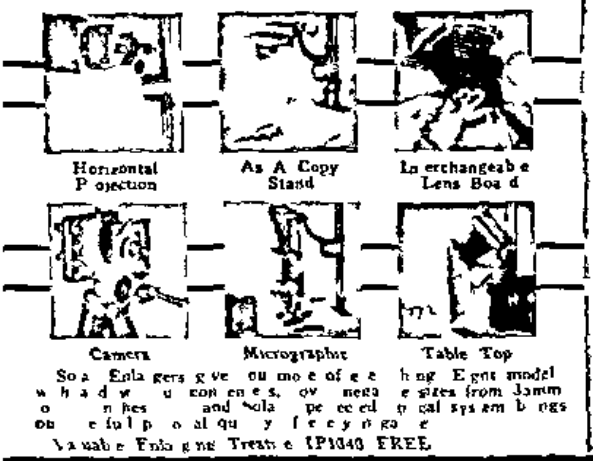
BELL & HOWELL COMPANY
1849 Larchmont Avenue Chicago, Ill.
Send complete information on ☐ New Step Printer ☐ new Microsound Printer ☐ new Rolling Shift Camera
Name
Street
Address
City *State*

PRECISION-MADE BY

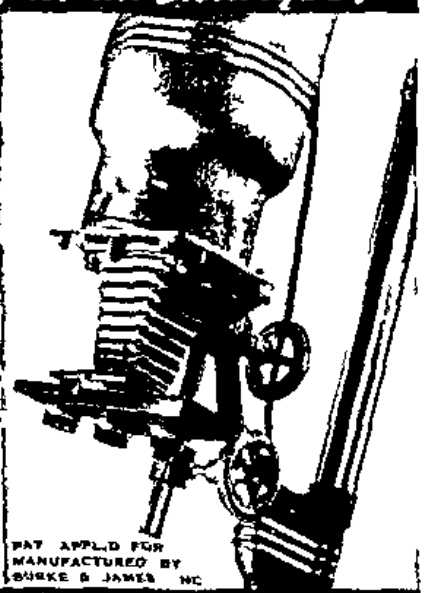
BELL & HOWELL

When you buy a SOLAR you get more than just an Enlarger!

1ST— IT MAKES PERFECT "PRIZE WINNING" ENLARGEMENTS
—AND YOU CAN ALSO USE IT FOR



Solar Enlargers give you more of everything. Eight model variations convert 35mm negatives from 35mm to 8x10 inches and Solar precision optical systems bring out the full potential quality of every negative. Valuable Enlarging Treatise (P1040) FREE.



PAT. APPLD FOR
MANUFACTURED BY
BURKE & JAMES INC.

BURKE & JAMES, Inc., (Est. 1897) 223 W. Madison St. Chicago

GRADUATED FILTER

(Continued from page 20)

a white man into a colored and similar stunts.

It should be remembered that these graduated filters cannot be successfully used in the round type of filter since the horizon varies with almost every picture taken. Square graduated filters are the only kind to use with success. This is particularly true in motion pictures as constant adjustment is necessary. These filters may be obtained in any length desired.

Try some graduated filters in your pictures and surprise yourself with the wonderful effects you really can get. They will help any photographer.

TRADEWINDS

(Continued from page 23)

Owners of a Filmo 121 or a Simplex Pockette will be pleased to know that, in constructing the Goerz Parallax Free Focuser and Field Finder Control we have created a remarkable device which eliminates these troubles completely.

It is inserted into the camera in place of the film magazine and held in place by pressing a finger against the protruding button (1). Upon pressing the shutter release trigger to the single exposure position a pilot pin at the front end of the focuser holds the shutter open.

Before focusing the object on the ground glass, it is of great importance to set the focuser to conform to the individual eyesight by turning the ocular (2) until the eye perceives the grain of the groundglass in the sharpest possible detail. Leaving the ocular in this adjusted position the image produced by the photo lens may now be viewed on the groundglass right side up and while turning the lens mount (3) a sharp focus can be taken through the 4 X magnifier system.

Where necessary an increased 8 X magnification may be had showing only the center section of the field. This change is obtained by pulling out the rod (4) which shifts the intermediate optical system of the device into the proper position.

After adjustment of focus has been made the device is removed, the film magazine placed in position and the camera is ready to take the picture exactly as it appeared in the Goerz focuser finder. This device will not operate with the Filmo 141. Price $12.00.

for difficult shots — THE ORIGINAL
Scheibe's Monotone Filter
INDICATES instantly how every color and light value of a scene or object will be rendered in the finished print before shooting the picture. Always ready.
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INTERNATIONAL photographer

Vol. XII November, 1940 No. 10

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"Skyscraper" by Harold Wyckoff See other pictures on pages 4, 5 and 14 and 15 and story on page 3

Next Month

William Mortensen that very eminent photographer who enjoys a nation wide reputation and is recognized by his colleagues in Hollywood as a talented artist who has contributed much to photography and whose unusual talent has enhanced the profession, has kindly consented to be a regular contributor to International Photographer

It is our intention to print a full page nude each month with incidental notes and editorial remarks as they are supplied by Mr. Mortensen In the December issue we will discuss this at length and relate more about the artist particularly concerning his work and life.

Our regular feature on Television has been eliminated this month, due to space occupied by papers presented at the recent SMPE Convention here in Holywood To our television minded readers who may be disappointed we promise to make up for this in the next issue with an article by the well known Harry Lubcke, Chief of Television at the KHJ Don Lee Station

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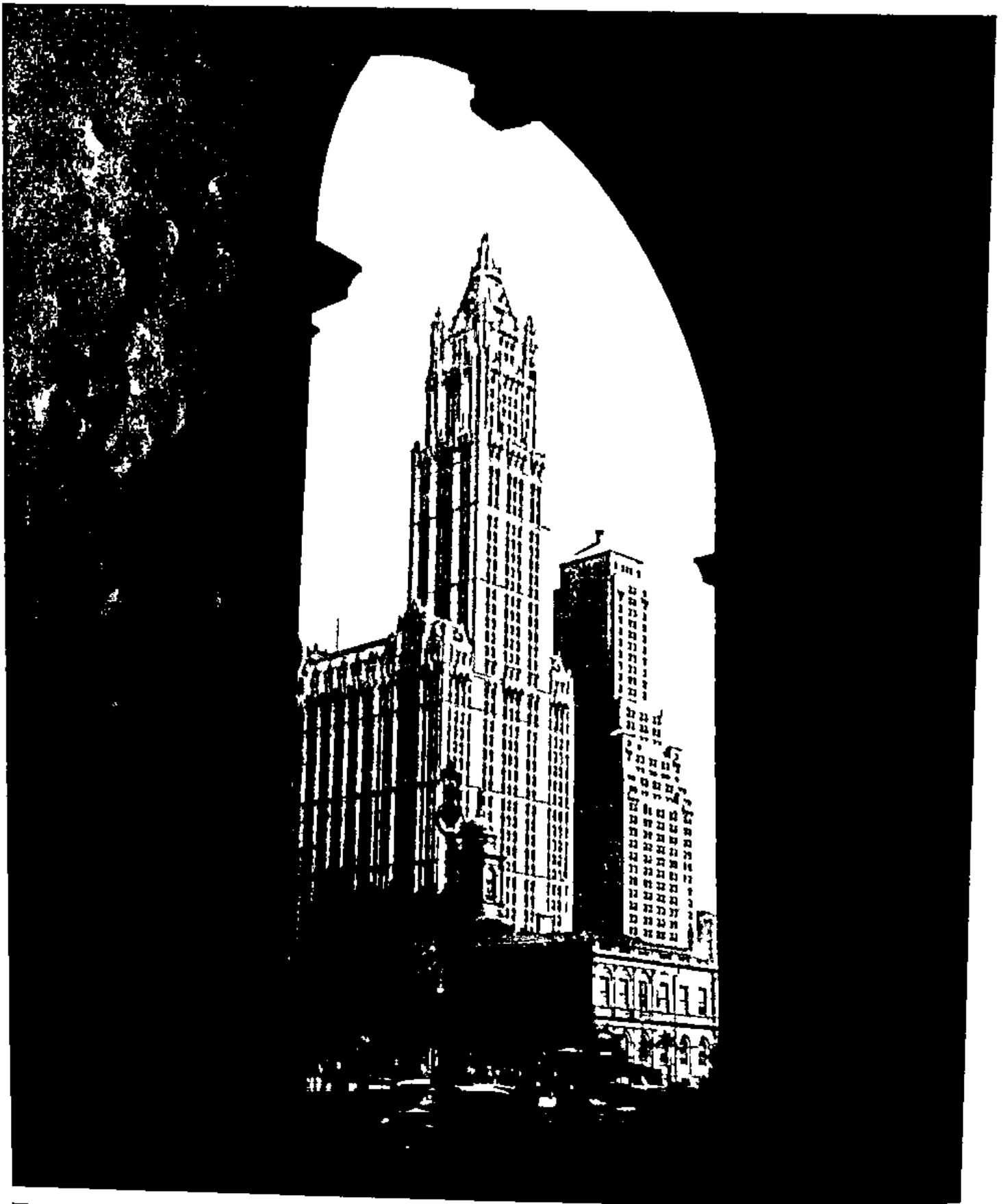
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INTERNATIONAL PHOTOGRAPHER, as the monthly official publication of International Photographers, Local 659, of the International Alliance of Theatrical Stage Employees and Moving Picture Machine Operators of the United States and Canada, not only represents the entire personnel of photographers engaged in professional production of motion pictures in the United States and Canada, but also serves technicians in the studios and theatres, who are members of the International Alliance, as well as executives and creative artists of the production community and executives and engineers of the manufacturing organizations serving the motion picture industry INTERNATIONAL PHOTOGRAPHER assumes no responsibility for the return of unsolicited manuscripts or material

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BROWN CALDWELL



Woolworth Building viewed from one of the archways inside the Municipal Building New York

By Harold Wyckoff



SHOOTING HIGH

By HAROLD M WYCKOFF

★ **Elimination of people and traffic in these stills of New York constituted a stiff assignment**

Harold Wyckoff was the first cameraman to film many tribes of the Arctic regions in Siberia with an expedition of the Smithsonian Institute also in Northern Canada and with the A.E.F in Archangel. He photographed and directed the historical film depicting the 250 years of the Hudson Bay Company in Canada, for that company and was for years with Pathe News as a newsreel cameraman

From Paramounts still department he graduated to Farciot Edouart's Transparency Department at the same studio where he specialized in the production of lantern slide backgrounds and invented many unique ways of combining different scenes into one composite view

In deviating from the custom of publishing pictures of locales around Hollywood proper the International Photographer sought to bring to its readers a form of photographic impressions It should be observed in examining the cover that Wyckoff produced an angle shot against a beautiful sky leaving the thought that the building goes up just barely missing the top of an imaginary roof This depicts New York skyscrapers in such a manner that one who never has seen such a structure will understand how immense and overwhelming is a building of this kind either when visualized or seen for the first time

The pictures dealing with the bridges again create photographic impressions Two different thoughts are left with the reader the importance of this gigantic structure as a means of connecting different parts of the great city and the unusual and beautiful lines of a bridge which in everyday life may mean nothing to the man going about his business The important point is that not always is it the subject being photographed but the approach manner and treatment used to arouse the sense of beauty that is in most cases dormant in the average observer (Editorial Note)

Because these pictures were intended for still projection it was necessary to minimize any indication of life or traffic in the street scenes This made it a very difficult assignment It necessitated working Sundays and holidays when fewer people were on the streets of the business section

Some of the many forbidden objects that had to be guarded against were waving flags which would disclose in the composite shot that it was a still plate moving boats and barges, elevated trains blimps (there were often three dirigibles with sightseers aboard dodging around the buildings) people on the street and of course motor traffic

When all of these had been avoided there still were window washers bobbing in and out of windows on the forty story buildings My curiosity about so many window washers finally brought out the fact that one building alone at Wall Street and Broadway employs fifteen of them and even then they can get around only once in every three weeks

When leaving for New York I had ideas of using the rich blue skies such as we have in California to obtain striking effects for weird sequences wanted by the studio On arrival in New York Mr F O Bagley was appointed to uphold the dignity of the New York Local and he called my attention to the buttermilk skies that they have there nearly every day Although born and raised in New York that fact had escaped my memory in the seventeen years I had been living in California

The deep red filters are almost universally necessary there to cut the pestiferous haze that hangs over the upper half of the tall buildings and that word haze is the real bugaboo in photography there

The deepest filters however have no effect on the average New York sky The filters do cut the haze but seldom give the black skies that we record in California scenes

Some shots were long exposure well filtered down so as to give traffic time to wipe itself out with movement but the great difficulty in this respect was bright metal objects on cars such as headlights and bumpers that no amount of filtering could control.

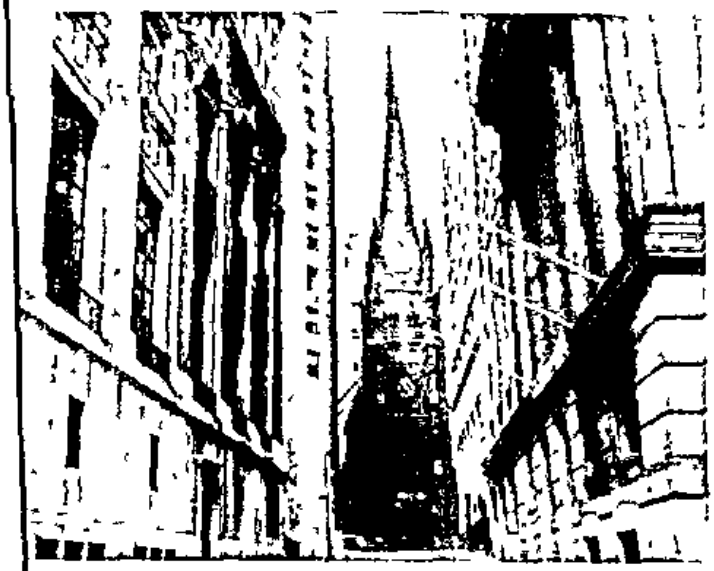
Because of the European war just having started permits to photograph from bridges and near ocean liners were difficult to obtain and on one occasion it was evident that at least one foreign observer was on the job too to see just how far one might go with a camera Personal conductors accompanied us in power houses and in many tall buildings as though they doubted these folk from Hollywood



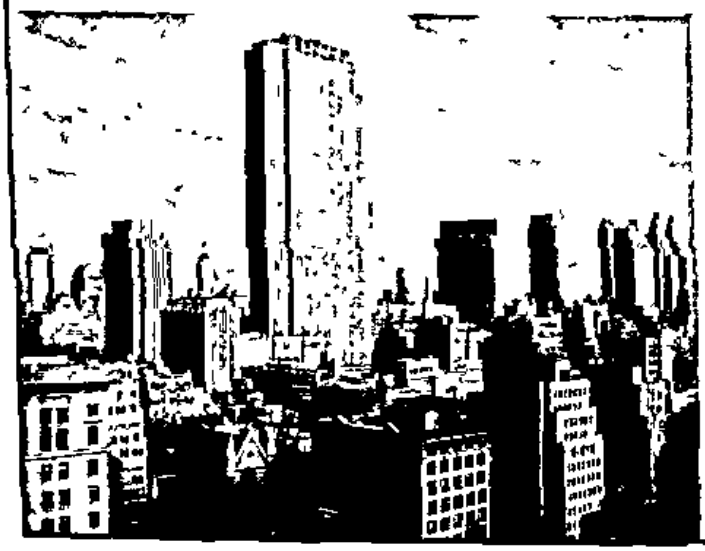
Empire State Building in the distance On the very top is television antenna













Looking down on Broadway
Old Trinity Church
Rockefeller Center Buildings

City Canyon
Washington Square Arch
New York City from the air.

special effects to order

★ Nothing is impossible to these wizards who build a treacherous situation and then frustrate the villain with the twitch of a string

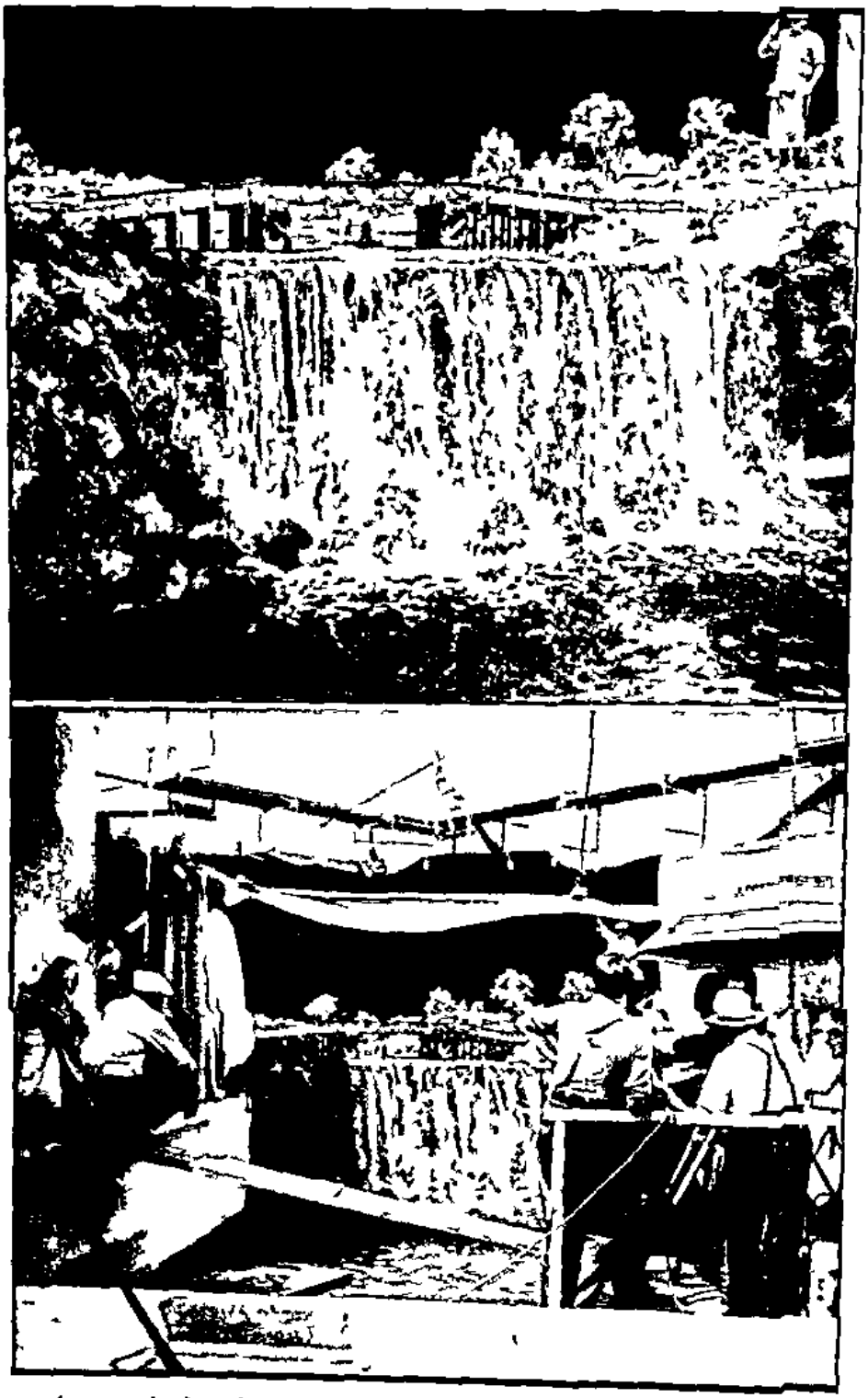
● Maybe it didn't happen this way and then again maybe it did. Maybe the gag men were leaning back in their respective chairs. They might even have had tinkling glasses in their hands and one of them might have said: "Here's how we effect a meeting between a boy and girl. John Hubbard and Adolphe Menjou are about to go over the falls on this raft when the girl drives her truck across the bridge just above the falls and throws out an anchor which catches on the truck and pulls them to safety."

It could have happened just that way and for the same reason that nations go to war it stayed that way in the picture "Road Show," current Hal Roach release. Here's a clue on why we have wars. Men who figure them out don't have to fight them.

Suppose just for the fun of it that the man who thought out the gag had to figure it out in detail. Roughly this is what he would have to consider. First he needs a waterfall with a bridge above it. If such a location could be found he would then need a point out somewhere in front of the falls on which he could place a camera so that he could show the menace of the falls, the action of the men on the raft and the action of the girl on the truck. Oh, yes, we forgot. It is night and foggy. So if he could find a spot with a sky hook or something a few hundred feet above the spot generally marked by a nice vicious whirlpool he would then only need to transport men, lights, fog equipment, generators, etc., to the spot and find two men who would risk going over the brink for the sake of dear old art.

If all of this added up to too much it would most likely be turned over to the special effects department with about the same amount of decorum that a Barbary Coast waiter uses in ordering ham and eggs.

Now if the same man still were to carry through he would have to proceed something after this manner. His first consideration would be a spot where he could dispose of the water used in making the falls. Then he would need to provide means for supplying water to the falls in sufficient quantity to last while the action was transpiring. He would have to build a framework corresponding to the landscape and dress it. That part corresponding to the river bed would need to be waterproof material. He would need to provide a sky backing. Since a miniature, in order that it might be given the illusion of magnitude, must be shot at high speed, his whole set



At top is the desired effect (minus the man at right who pulls the strings that operate the truck or raft) and below is illustrated some of the trouble involved to produce the result

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This cabaret scene from "Angels Over Broadway" Columbia picture featuring Douglas Fairbanks and Rita Hayworth has the unique quality of being shot without dollies or top lighting in typical Garmes style. Left to right are Bob Wasserman, assistant cameraman; Bob Martin, second; Jack Anderson, assistant; Jockey Feindel, second; Walter Lackey, assistant. Lee Garmes, director of photography and Ben Hecht, writer, producer and director are shown in the foreground. Still by M. B. Paul.

PADUCAH SPOTLIGHT

★ CAMERAMEN HAIL NEW LAMP DEVELOPMENT

It is obvious to most informed cinematographers and studio set electricians that the important new lamp design ideas of current interest are concentrated in the field of the spotlight and related small portable efficient lighting instruments. This is a natural result of the tremendous progress made by the film emulsion and lighting unit manufacturers during the past ten years.

Industry practice and equipment in the larger "broad and flutter" sun Arcs has about reached a peak of standardization and perfection. New trends in that realm must wait some new sensational development that will justify the major revision of industry technique. Consequently inventive and improvement minded technicians are trying all sorts of experiments in providing new small lamps versatile portable units, special lamps for unique effects, anything to refine and expand the artistic possibilities of motion picture lighting technique.

One offshoot of this spotlighting of the spotlight is the development of a number of units which because of their versatility and portability have been snapped up by amateur cinematographers and still photographers as great assets to their work.

The Paducah Spotlight is an interesting product of this tinkering trend by technicians. It is the brain-child of a veteran of theatre and studio lighting, Paul Thilley, Paducah, a member of Studio Set Electricians Local No. 723, IATSE and MPMO of U. S. & C.

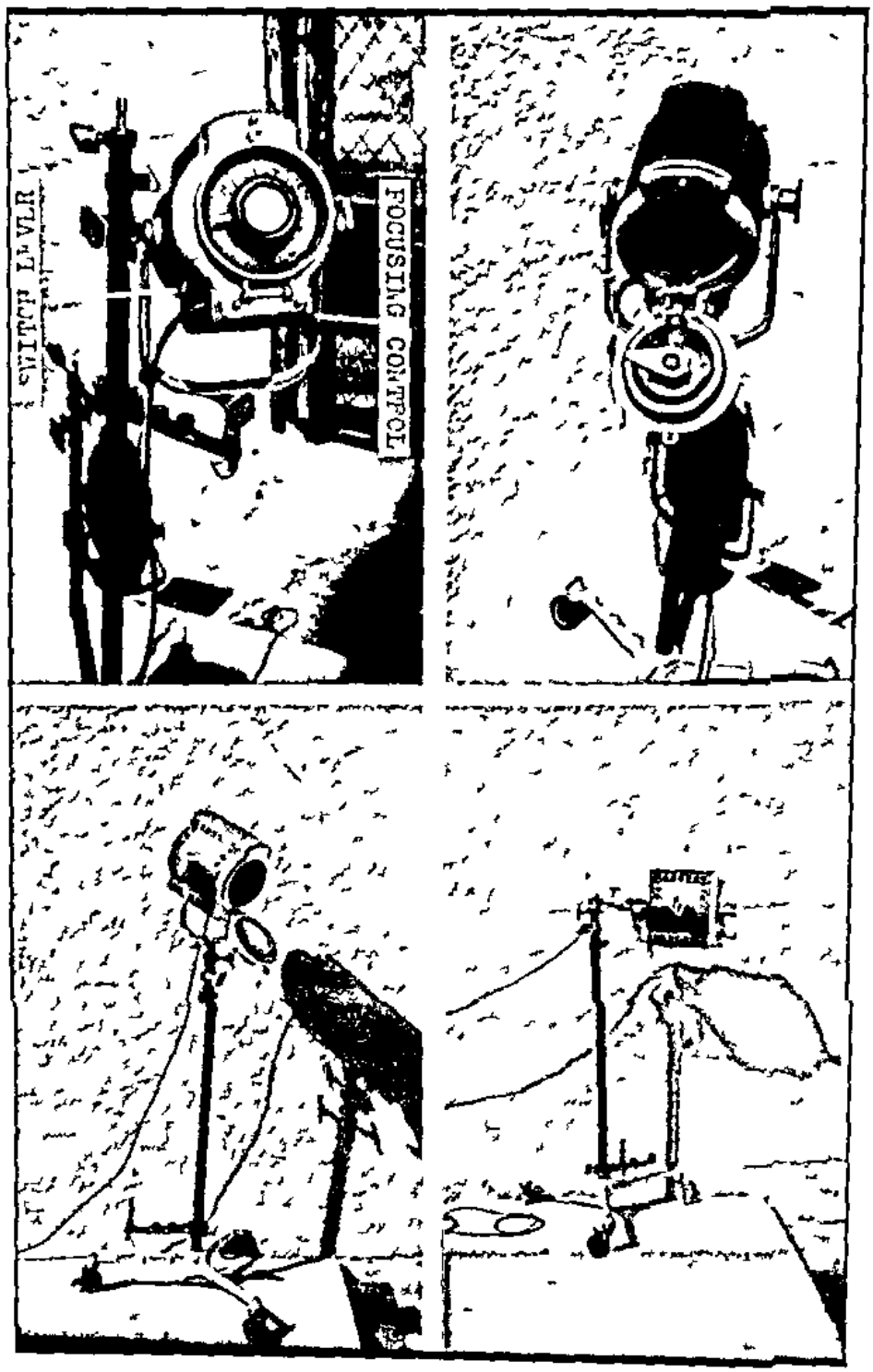
Brother Thilley is known to his associates as "Paducah." The nickname is derived from his home town, Paducah, Kentucky, and when he finally turned out his lamp it was to that familiar nickname that he turned for a trade label.

The outstanding features claimed for the lamp are a remarkably accurate dimmer system, super-efficient cooling system and lightness of weight in comparison to the durability and construction.

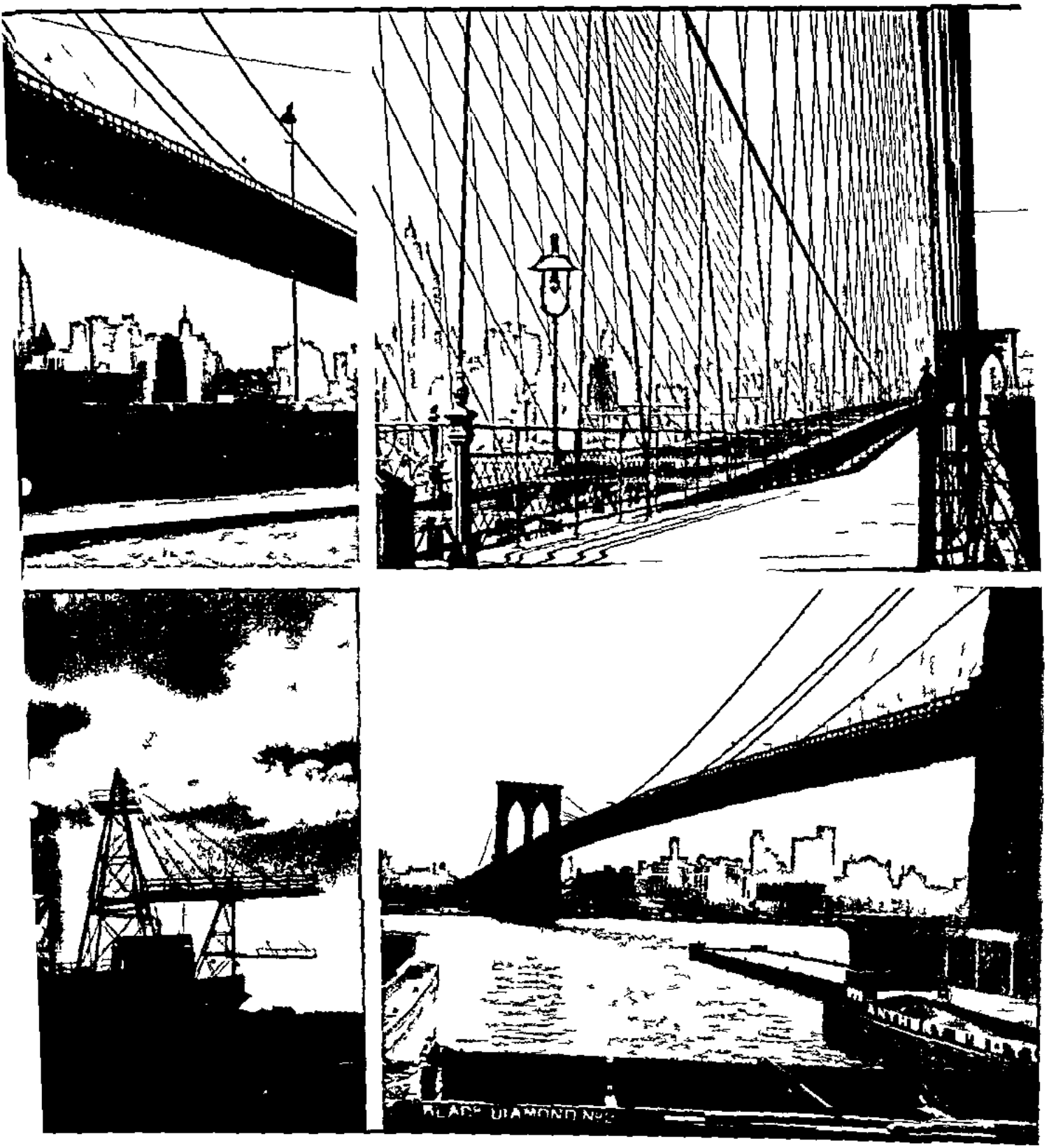
The Dimmer is mounted in the rear of the head on the inside of the rear door and has a very slow drop of over one hundred steps. It is so constructed as to give accurate density of light without the use of diffusion and has a range of from five hundred watts to approximately twenty five watts in density.

This Lamp has a specially constructed polished mirror of non corrosive, non tarnish, non breakable material. It has a stand with triple risers which will accommodate any standard equipment of the

(Continued on Page 25)



Upper Rear view showing resistance control, focusing control and switch, rear door open showing resistance mounted on inside of door. Lower Spot with lens holder down for flat flood which also gives free access to globe with neck broken for angles.



grapher Harol l Wyckoff has captured the beauty of the me for the great c ty in the backgroun l In the lower sting s ll ouette along the waterfront at dusk.

S.M.P.E. CONVENTION

★ **Abstracts from some of the papers read at the recent convention in Hollywood**

The following abstracts from papers read at the recent SMPE Convention will we believe, be of interest to our members and other readers (Editorial note)

I J Wilkinson and W Hamil Editing a Motion Picture, ton *RKO Radio Pictures Inc* Los Angeles Calif

The paper is an attempt to reduce to words a portion of the mechanical and artistic elements involved in the process of editing a motion picture The authors realize that they are dealing with a highly controversial subject but feel that as there is so little pertinent material available on this phase of motion picture production this paper may serve as a preliminary to a study on a larger scale

Consideration is given to the origin of film editing and its advancement from the purely mechanical craft of the early days to its present status as a contributing factor in the entertainment and dramatic values of the motion picture of today

Demonstration film is presented to illustrate various editing technics and to show the possibility of their use as a means of drastically altering original story and dramatic conception

Measurement of Photographic Printing Density; J G Frayne *Electrical Research Products Inc.*, Hollywood Calif

When the spectral sensitivity of positive film is simulated by the use of a suitable combination of phototube and optical filter in the integrating sphere densitometer the printing density of any type of negative irrespective of grain size with any type of base or backing may be accurately determined Printing density is practically independent of the type of light source or filtering employed in the printer Relationships between printing and visual diffuse densities for various types of negatives have been established

Photoelectric Method of Rating the Light Speeds of Lenses D B Clark *Twentieth Century Fox Film Corp* Hollywood Calif

Photographers and cinematographers have realized for some time that something was wrong with the present method of calibrating light-stops on lenses As various makes of lenses were interchanged on shots throughout the making of a motion picture, it became more and more obvious that the *f* rating did not represent a true value of the light transmitting capacity of the lens As a result the real tough job of a cameraman has been to match negative densities in a procession of shots that have been made on lenses of different makes, different focal lengths and different stops Even though the lenses are rated as to light speed and calibrated under the *f* system it is still a guessing game since some of these ratings are as much as one hundred per cent in error when reduced to actual transmitting capacity of the lens Since the *f* system is the only system used at present for rating the light speed of lenses cameramen have been forced to use this system but have found that it is merely a guide and can not be depended upon where accuracy is required In view of all this, it is believed that a system for rating the light speed of all lenses based upon actual light transmitted through the lens regardless of make size or any other physical characteristic of the lens, should be of value not only to lens makers, to give them a reading on the overall efficiency of the lens but also to the cinematographer to give him an actual effective rating as to the light valving capacity of the lens

A New Treatment for the Prevention of Film Abrasion and Oil Mottle, R H Talbot, *Eastman Kodak Co* Rochester, N Y

A new type of lacquer has been devised which may be simply and rapidly applied to either one or both sides of 16- and 35-mm films and which may be readily removed in ordinary processing equipment by the use of carbonate solution The function of the lacquer is to absorb all the ordinary cinch marks and other abrasions commonly found on cine films which have been in service in the trade Tests in the field have indicated that the lacquer is somewhat more resistant to abrasion than are the normal film surfaces When the lacquer has been removed and replaced with a fresh coat the film is found to be in essentially as good condition as when new The lacquer is useful in protecting negatives, master positives duplicating negatives, and prints from all ordinary abrasions In addition the lacquer because of its glossy surface eliminates the mottle or flicker on the screen due to oil on the film

Some Laboratory Problems in Processing 16-Mm Sound with Black-and-White and Color Films, Wm H Offenhauser Jr., *Precision Film Laboratories* New York, N Y

The duplication of 16-mm films involves many relatively intricate problems not encountered in the laboratory processing of 35-mm sound films. These problems have given rise to procedures and apparatus radically different from those in use in 35-mm.

The two major differences that are especially significant are (1) the use of reversal for original films (2) the existence of but one row of sprocket holes on the 16-mm sound film

It is interesting to note that all our present standards in 16-mm blindly assume the negative-positive method of operation ignoring entirely the reversal and Kodachrome At the present time even the emulsion position of the 16-mm film is standardized on the basis of a 35-mm sound negative and 35-mm picture negative as originals As a result our 16-mm dimensions so derived from 35-mm are inconsistent with the projector dimensions at present in use and inconsistent with the pressing needs arising from the direct 16-mm field

Much of the difficulty arises from the rather obvious lack of concern displayed by the 35-mm entertainment industry and the very rapid simultaneous growth of direct 16-mm in educational and industrial applications especially in connection with the duplication of sound on Kodachrome

Some of the special processes and special apparatus features involved are described which have made possible workable solutions to the problems involved

Reduction of Sprocket Hole Modulation in Film Processing, M Leshing T Ingman, and K Pier *Twentieth Century Fox Film Corp., Hollywood Calif*

One of the contributing factors to sound track degradation is sprocket hole modulation This is probably more common known as 96-cycle modulation and results from nonuniform action of developer around the perforation holes during the time of processing Its chief remedy is turbulation

The practical aspects of controlling the amount of sprocket hole modulation is described herein Curves showing the increase of this distortion due to diminished turbulation are included as well as those showing the intermodulation of recorded sound by sprocket hole agitation Photographs showing various types of sprocket hole modulation are also presented There are also shown samples of modulation contributed by developing machines through mechanical defects such as pressure created by binding rollers and mechanical frictions introduced in the processing machine proper A complete description of the turbulation methods employed at the Film Laboratory of Twentieth Century Fox Film Corporation at Hollywood is disclosed and the various sensi-

tometric means of control relative to this problem are given

Some Observations on Latent Image Stability of Motion Picture Film, K Famulener and E Loessel *Agfa Ansco Corp* Binghampton N Y

The observations reported are the result of an investigation to determine definitely the effect of a delay between the exposure and development of modern motion picture films The stability of the latent image in terms of speed gradation graininess and color response has been studied

In general a definite speed increase was noted on negative emulsions a decrease on positive emulsions There were also changes in gradation and graininess The detailed findings which vary considerably with the individual emul ion type are given followed by a general discussion and interpretation of the results A brief review of the literature is included

Fixing Baths and Their Properties, J I Crabtree H Par ker and H D Russell *Eastman Kodak Co* Rochester, N Y

In addition to removing the unreduced silver halides from an exposed and developed emulsion the fixing bath should (*a*) arrest development immediately, and (*b*) harden the gelatin film so as to prevent excessive swelling during washing and reduce mechanical injury during handling

The fixing agent usually consists of sodium or ammonium thio sulfate or a mixture of sodium thiosulfate with ammonium chlor ide Tl e bath also contains an acid (usually acetic acid) to arrest development sodium sulfite which inhibits the precipitation of sulfur and potassium or chrome alum which tans the gelatin

The addition of developer carried into the fixing bath tends to cause the precipitation of aluminum sulfite but this can be pre vented by (*a*) revival of the bath with acid at intervals or (*b*) the addition of boric acid which also extends the *p*H range over which effective hardening is obtained The exhaustion point at which revival should occur may be determined with *p*H indicators

Various firing bath formulas are included and their properties discussed in terms of (*a*) developer capacity (*b*) sludging and scumming propensity and (*c*) hardening life

The Effect of Developer Agitation on Density Uniform ity and Rate of Development, C E Ives and E W Jensen *Eastman Kodak Co* Rochester N Y

A number of essentially d fferent methods of developer agita tion of interest in motion picture work have been studied experi mentally In one case the film was held against the inside wall of a conduit through which the developer was pumped at pre determined velocities so as to maintain the required conditions of turbulent flow By mounting a loop of film on a pair of rollers the effect of variation in running speed of the film was stud ed Tests were made of the effectiveness of liquid jets and also of wringers and scrapers for periodic renewal of developer at the emul ion surface In order to determine the relative importance of different degrees of developer agitation and of developer ren ewal by the process of unaided diffusion the rate of development was varied widely by adjustment of the developer formulas

Negative Exposure Control, D Norwood Capt U S A Ret d Hollywood Calif

It would be desirable to have negative exposure control on the basis of an exact science Toward this end the functioning of the human eye as it views a photo subject and th en the photographic reproduction of the subject is stud ed Tl e brightness of the photo subject is broken down into its components of reflectance a constant and incident illumination a variable The mechan ism of the eye acts to compensate for changes in the variable incident illumination Recognition of the tone of the object is based on its fixed property of reflectance It is this constant that determines the print density used to portray the object Between the subject s fixed reflectance and the print s fixed density lies the variable of negative density A system is proposed whereby a given reflectance in the subject is represented by a fixed density in the negative Many advantages derive from this system Oper ation of the system involves negative exposure control by means of measurement of incident light Measurement of effective inci dent illumination is best accomplished by means of a photoelectric meter specifically designed to respond to the three dimensional characteristics of incident illumination The system described is free from many of the influences which tend to cause undesirable variations and errors in negative exposure It provides a means of putting negative exposure control on the basis of an exact science

Hollywood's Low Temperature Sound Stage, R Van Slyker Los Angeles Calif

The California Consumers Corporation of Los Angeles set aside one of its large ice storage buildings to introduce to the studios a new method of making realistic snow scenes

The purpose of the ice storage building was to furnish a low temperature sound stage where water ice could be used for snow, and enable the cast s breath to become visible as actually occurs in cold or wintery climates

Snow is manufactured on the low temperature sound-stage by means of specially constructed portable blowers grinding 50-pound blocks of ice and expelling through suitable nozzle a fine, aerated snow directed to the set where and when needed

The introduction of Technicolor to the low temperature sound stage created many new problems in ventilation due to the low temperature of the atmosphere and quantity of air movement need to remove gases and smoke from the stage during shooting periods

The unusual heat load requirements necessitated the construc tion of external bunker systems to augment the existing refrigera tion for color production

This was accomplished by the combined use of water ice and ammonia refrigeration in these bunkers giving a total refrigerat ing capacity of approximately 650 tons in the system to chill 64 000 cfm of fresh air to 20°F

Problems in Television Image Resolution, C F Wolcott *Gulfillan Bros Inc* Los Angeles Calif

This paper is primarily thought provoking and states prob-lems involved in the consideration of suitable standards now be-fore the National Television Systems Committee

Resolution is discussed from a standpoint of the number of lines and fields within the limits of presently assigned channels Related problems touched upon are flicker frequency is illumina tion and some of the difficulties which must be guarded against with colored images such as faster displacement occasioned by superimposed extraneous magnetic fields or voltages

The effects of motion which tend to smear detail are dis-cussed in relation to frame and field frequency

The major l mitations of present scanning-spot shape and in tensity distribution which determine the vertical and horizontal widths of confusion have been removed in the laboratory introducing the possibil ty of markedly improved definition with a given numb er of lines and fields which much be reckoned with in determining standards

Wild Buffalo as Extras

The Arizona legislature meeting in special session has given its permission to 20th Century Fox to send 150 actors and workers into House Rock canyon of Arizona to film for a week among the only l uffalo running wild in the United States

Director Fritz Lang needs a l uffalo stampede to trap some of the cast for Zane Grey's Western Union" a $2,000 000 pro duction in Technicolor

Out of millions that roamed the West only a century ago there are today less than 10 000 most of them fenced in on national parks

LATIN AMERICAN MARKETS

★ By NATHAN D GOLDEN
Chief, Motion Picture Division
U. S Department of Commerce

Latin America with its 5 400 motion picture theatres, is an important market for motion pictures from the United States, owing to present war conditions in Europe, and this area with free accessability through shipping lanes, should become an even more important outlet for these products.

European films, which prior to the present war accounted for about 15 percent of the total shown in these countries are fast becoming unavailable to Latin American exhibitors With the proper type of films, producers in the United States should gain a good portion of this 15 percent and, added to the 76 percent of showing time in these markets now given to United States productions, there are some hopes that a very small portion of our European losses may be recovered

Latin American however should not by any stretch of imagination be considered as a panacea for our European losses, nor should these markets be used as a dumping ground for every motion picture produced by our Hollywood studios Furthermore when looking at Latin America as a market for the extended showing of United States motion pictures, it must be remembered that in the countries of Brazil Chile Colombia Cuba Honduras, Mexico, Panama Peru and Venezuela with a total of nearly 100 million people population figures alone do not constitute an accurate index to the size of the theatre-going public

Latin Americans have definite likes and dislikes as to the types of films shown in their theatres but it can be generally said that the well known United States film stars are well liked and that our pictures draw well at the box office also that our technique and photography are highly appreciated

ARGENTINA uses approximately 500 feature films annually and films from the United States are shown to the extent of 66 percent Argentine films stand second at about 12 percent French films are next with 10 percent British and German films follow in the order named There continues to be a definite preference for United States films in this market In recent years, however, Argentine pictures have become increasingly popular in the subsequent run and small town theatres, and in these houses they have displaced the foreign films to a considerable extent. Several of the studios are fitted out with first class modern equipment

There are 1,203 motion picture theatres in all Argentina, with a seating capacity of 611 322 Of these theatres, 940 are considered as active and of this number about one third operate on Sunday only First run houses generally offer two features with shorts but the majority of the theatres exhibit at least three features, and sometimes more Types of films best liked by Argentine audiences are adventure, historical romance and comedies

BRAZIL, with its 1,300 motion picture theatres having a seating capacity of 750 000 offers a good market for North American films. This market requires about 500 feature films annually, and only 57 percent of the films shown are from the United States The keenest competition afforded our films in 1939 came from French and German productions notably the former However, the latter, particularly since the war in Europe, have lost out heavily because of this propaganda Films from the United States are well received and are generally preferred to either locally produced films or other foreign pictures Local productions are, however, very acceptable, and in 1939 six feature films were produced Production facilities although not adequate in some respects are sufficient to meet the present small demand for domestic films Portuguese is the language of Brazil and dubbed language films are not acceptable to movie goers Action films, which do not depend entirely on dialogue seem to be preferred by Brazilians Musical comedies, light dramas and biological plays are preferred by first run audiences in the key centers In the interior and in many neighborhood houses, Westerns action pictures and serials are in demand

CHILE with its 263 motion picture theatres seating 200 000 persons requires about 400 feature films yearly United States films occupy 60 percent of the screen time of Chilean theatres Mexican and Argentine films for 16 percent, French 12 percent, and all others another 12 percent Films from France appeal more to the Latin temperment than do the United States films however Hollywood films are well received the chief complaint being that they are too moral and too much on the educational side for a public wanting entertainment Argentine films owe their popularity chiefly to their Spanish dialogue

The most popular films in the market are those with Spanish dialogue The better educated and more sophisticated audiences show a preference for spectacular musical and dramatic productions and light society comedies even when the dialogue is in a foreign language

COLOMBIA has 271 motion picture theatres. Of the films shown on its screens 75 percent are United States productions. Our strongest competition during 1939 came from France, Argentine, and Mexico Colombia requires about 400 feature films annually, of which France furnished 50 in 1939, 40 others came from other foreign countries Hostilities in Europe in the last quarter of 1939 interrupted the European source of supply for motion pictures, with the result that pictures from the United States, Argentina, and Mexico were about the only ones available in Colombia at the close of the year Very few "dubbed" films in Spanish are distributed Colombian audiences prefer pictures with the dialogue in the native language of the principal actors. The superior technique and artistic qualities of United States films, as well as the desire to see North American movie stars, give our pictures an advantage over most the foreign productions, even the Argentine and Mexican pictures although the latter with their Spanish dialogue, are naturally more widely understood in Colombia As foreign Spanish language pictures improve, English language pictures with Spanish subtitles may be expected to encounter stronger competition in the Colombian market

COSTA RICA is a small market having only 12 theatres with seating capacity of 21,500 but it requires about 350 feature films years United States films are given about 80 percent of all showings. Argentine and Mexican films are the chief competitors, representing 9 and 6 per cent, respectively, French British German, and other films account for the remaining 5 percent Here is a market where the serious type of picture is preferred to musical reviews and comedies, although the latter types draw good attendance at the box office

The language of the country is Spanish A fairly high percentage of the population understand English but superimposed titles in Spanish are generally used on all non-Spanish language films.

CUBA, an important market for films from the United States, has 375 theatres with an approximate seating capacity of 75,000 About 700 feature films are required annually to supply this market, of which 68 percent are from the United States, 20 percent are Argentine and Mexican 6.7 percent French 1.4 percent British, 1.2 percent Italian and less than 1 percent each German and Russian Motion pictures from the United States are well received by Cuban audiences and are shown a pronounced preference in the market Occasionally a film from Mexico or Argentina

WEATHER FROM NOZZLES

Weather once came in buckets in Hollywood. Now it comes through nozzles. As a result Hollywood today can change the seasons or whip up anything from a downpour to a snowstorm almost in the wink of an eye.

Almost every device known to science has been utilized by the studio experts to meet the weather requirements of the movies. They still can't provide the even sunshine that filters down from Southern California's well known skies but give them time and they'll probably even meet that requirement.

In mid July the Southern California landscape becomes sear and brown from an ardent sun. But what Director Irving Cummings needed for "Down Argentine Way" was the lush, green countryside of Spring to match the shots obtained by a *special crew sent to the Argentine*.

That need was met by mixing a coal tar derivative used in coloring ice cream, gelatines and such foods with about 160 gallons of water and spraying the mixture over the brown vegetation on the hillsides. The result was as deep and inviting a green as Mother Nature ever contrived. Six men with nozzles did the trick.

Fog too, comes through nozzles today. In pictures such as "Hudson's Bay," "The Californian" and "Chad Hanna" the fog comes welling up from pipes concealed in the ground. It is, in fact, mineral oil heated to the vaporization point, then cooled and sent billowing exactly where it's needed.

Snow and rain once came in buckets. White paper torn into small bits, passed for snowflakes on the screen, and rain was simply water poured down on the hapless players by a bucket brigade perched overhead.

Today huge ice crushing machines into which 100-pound cakes of ice are fed produce a kind of snow that can hardly be told from the natural variety and broad nozzled pipes send it fluttering down exactly as if Dame Nature was at work. That's the way they make some of the snow scenes seen particularly in the Sonja *Henie pictures.*

As for rain, sprinkling systems which can be quickly rigged on the set are turned on and if a real drenching downpour is needed a few men with fire hoses are added.

The typhoons and monsoons are created, of course, by huge motor-driven fans. Where it is necessary to concentrate wind power a sort of funnel is built about the wind machines so that the direction of the wind can be controlled within fixed limits. That way they get anything from a gentle spring zephyr to a tornado.

Gypsum and cornflakes are still the standby in creating vistas of snow that must remain on the ground for some time. That's about the only place where the old buckets are still used.

Hundred Million Dollar Props

They talk in telephone numbers out here quite often when unusual stage properties (props in theatrical lingo) are employed in a picture. They cost this and cost that, say the liars, mentioning huge sums. It's frequently close to the truth too, but never in modern history as close as the current report that Jean Hersholt's forthcoming "Dr. Christian" picture employs props which originally were valued at $100,000,000.

Picture not yet titled deals with an oil swindle in the good medicos Minnesota town of Rivers End and Stephens-Lang producing for RKO Radio resurrected stock once worth that much issued by a defunct company involved in a nation wide scandal ten years ago. Rental cost to the picture was $6.50.

Warner Bros. Guarantee Jobs

Employes of Warner Bros. Pictures, Inc., who are drafted or who are members of the National Guard will be given their jobs back at the expiration of their military service.

This was announced today by Harry M. Warner, president of the company. He stated that Warner employes would be given a special leave of absence for the period of their active duty.

Mr. Warner assured the employes that the positions they held with the company at the time of entering military service or similar positions, will be available when they return. In addition all employes who have been with the company over one year will receive two weeks extra salary when reporting for duty.

Consideration will be given to the payment of a monthly sum to the employee or his dependents, such sums to be decided upon after giving due thought to financial circumstances in each particular case. The Warner Club will continue the member in good standing during the period of his service.

Tom Mix Memorial

In location at Newhall, Calif.—at almost the same site where the great star got his first screen "break"—as the tragic news of Tom Mix's passing was broadcast the players of "Riders of Death Valley" later announced plans for the founding of a pioneer film museum to be dedicated to his memory.

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PATENTS

By ROBERT W. FULWIDER
Patent Attorney, Los Angeles

No 2,211,331—Control Arrangement For Magazine Cameras. *Aloysius F Lechleitner*, assignor to Eastman Kodak Company Appln Oct 20 1939 8 claims.

A shutter operating means on a film magazine for manually closing the shutter of the magazine

No 2,211,347—Removable Coating For Photographic Film *Gale F Nadeau* and *Alfred D Slack*, assignors to Eastman Kodak Company Appln May 12 1939 10 claims

A sensitive photographic element comprising a water-susceptible superficial coating and over said coating a layer containing an alkyl aryl sulfonate the composite coating being readily removable in photographic processing baths

No 2,211,363—Lubricating System For Motion Picture Projectors. *Karl Brenkert* assignor to Brenkert Light Projection Company Detroit Mich Appln Oct 1 1938 6 claims

A device for lubricating a motion picture projector by dropping oil on the revolving blades of a fan-like member

No 2,211,364—Motion Picture Projector. *Karl Brenkert* assignor to Brenkert Light Projection Company, Detroit, Mich Appln Nov 21, 1938 7 claims

A motion picture projector having a rotating lubricating means

No 2,211,383—Method of and Device For the Colored Reproduction of Films *Stephan Oehninger* Switzerland and *Willy Wuhlau* Germany assignors to the firm Lord Investment Corporation Limited Zug Switzerland Appln Feb 4 1937 In Germany Feb 5 1936 11 claims

A method of producing a color film by printing a black and white positive and a toned positive in register

No 2,211,763—Cinematographic Apparatus *Adolphe E Carlson* assignor to Technicolor Motion Picture Corp Los Angeles Calif Appln Nov 22 1938 2 claims

A film gate through which two films in face to face contact are fed and having a lubricating pad to lubricate the margins of the film

No 2,211,806—Tonochromatic System and Film *Francisco G Yanes* New York N Y assignor of thirty per cent to Tomas Pacanins New York, N Y, and fifteen per cent to Florencio Gomez Trujillo City Dominican Republic Appln July 15 1937 4 claims

A color film having two emulsions on each side of a support with a thick and a thin emulsion on each side each emulsion providing a different pigment

No 2,211,807—Method of Producing Pictures By Discharge *Francisco G Yanes* New York N Y., assignor of thirty per cent to Tomas Pacanins New York N Y, and fifteen per cent to Florencio Gomez Trujillo City, Dominican Republic Appln July 15, 1937 7 claims

A method of producing colored motion pictures by removing pigment from a non light sensitive medium so that a colored picture remains

No 2,211,995—Photographic Camera *Joseph B Walker* Los Angeles Calif Appln Dec 5 1939 4 claims

A view finder for cameras in which axial movement of the lens moves a mask across the field of the viewfinder

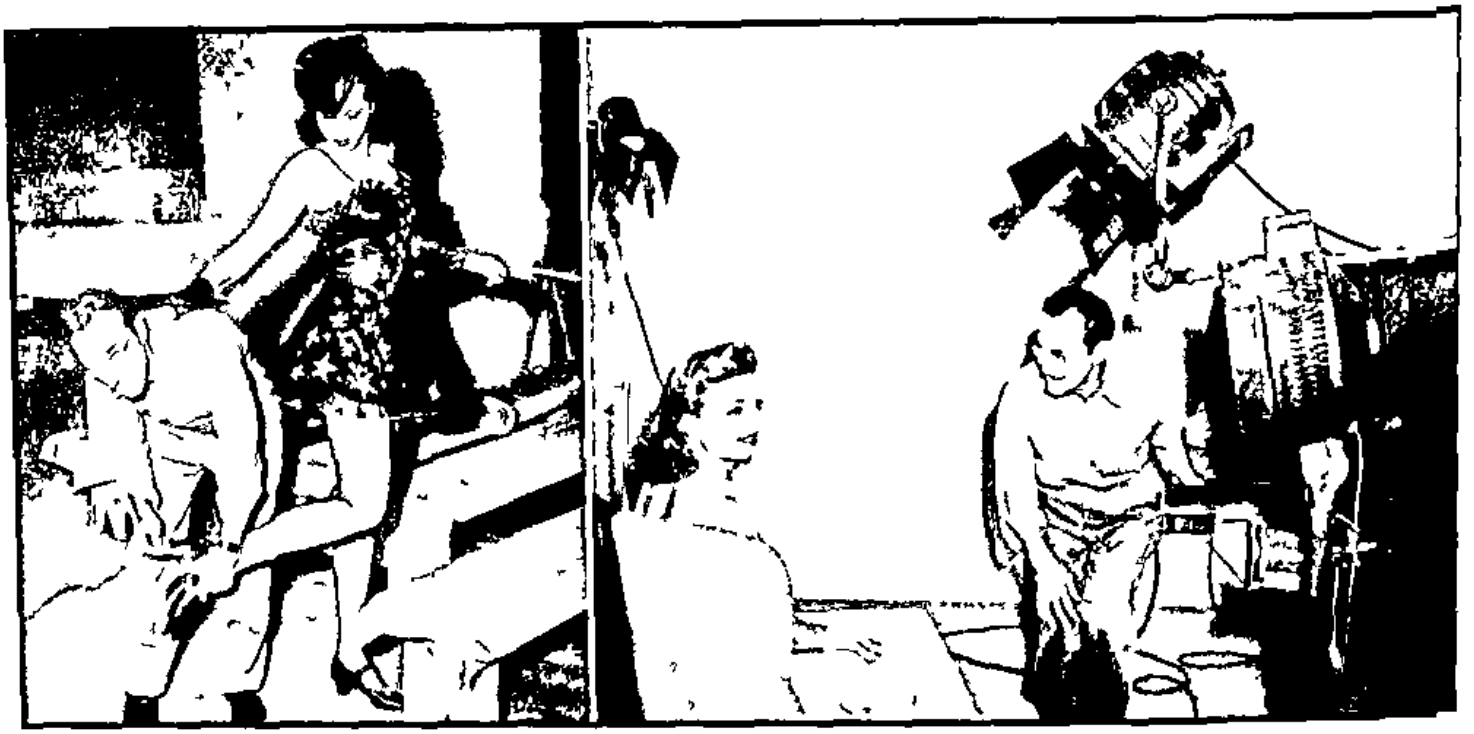
No 2,212,617—Film Strip Handling Apparatus *Roy S Otto* West Los Angeles Calif Appln June 14 1937 14 claims

A film reel support with a counter for counting the number of turns of film removed and an electric motor for rewinding that number of turns

(Continued on Page 26)



Gordon Head stillman persuaded two visitors to appear in this informal shot from Universal's picture The Leather Pushers' featuring Richard Arlen and Andy Devine At top left under the hat is Herbert Aller, Business Representative of Local 659 and beside the camera is Campbell Jr prospective member The others are Max Nippell gaffer, Art Lasky, assistant cameraman, Fred Campbell head of Universal Camera Department, Stanley Cortez first cameraman Jack Young second, Walter Williams assistant, Johnnie Martin second, Lloyd Ward, assistant and Dorothy McCormack, script girl



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(1000 2000 watt)
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Bardwell & McAlister incandescent lights lead the field for every motion picture lighting need Engineered and manufactured to the thousandth degree of accuracy they are universally recognized as the finest lighting equipment available This precision accuracy designing engineering and manufacturing supremacy means better pictures saving of time no costly retakes, more light at less cost less weight to carry less heating problems longer hours of use per globe—lifetime service—for Bardwell & McAlister lights are made to the exacting requirements of the world's outstanding motion picture producers and photographers Furthermore B & M lights include all the latest developments in photographic and film technique because their engineers are in intimate touch with motion picture studios film manufacturers and outstanding lighting research engineers. This means when you use B & M Equipment you enjoy all the benefits of the most efficient lights for your every photographic need

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FOCO SPOT ATTACHMENT
Optical attachment for Baby Keg Lite Provides shar p or soft edged circular or rectangular shapes Protects backgrounds.



DINKY INKIE
(00-150 watt)
5/4" diameter 2" tall wt 3½ lbs When space is small and lighting important—use a DINKY

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FOG EFFECT FILTERS

By George Scheibe

● Filters to produce fog effects got their start back in 1917 and have been very popular ever since. Naturally fog cannot easily be controlled to give the photographic effect, especially at night when the lights used for motion picture production and even street lights or any other illumination shine through the fog like so many searchlights. During the daytime natural fog does not show up strongly in a picture, especially those taken at close range. So I got busy trying my luck at making fog filters. Gradually I developed various densities that satisfied the motion picture cameramen who are always looking for some new and improved adjunct to their work.

The effects obtained with these filters were ideal, as natural as the real fog would be, and did the trick of producing fog for motion picture film at any time during the day or night. Whenever the script calls for fog the cameramen now put on the proper density of filter. There's no waiting for fog, it can be had at a moment's notice. Fog filters are here to stay and are becoming more popular every day. Properly made they will require no increase in exposure and will give you the kind of fog you want in your pictures.

The following are the filters to be had. No. 1/8 and 1/4 are for early morning mist or atmospheric haze. The No. 1/2 is for very light fog effect. The No. 1 is for fairly light effects. The No. 2 is for medium and the No. 3 for heavy effects. The No. 4 is for "London fog" effects and I have been sending filters to London where they have plenty of fog. The No. 5 is a graduated type and will produce effects heavy in the distance and very light in the foreground. They can be used from any side of the camera, a high fog, low fog or incoming effect. Any kind of an effect can be had with these filters.

I made a graduated fog filter for a Hollywood studio 3 inches by 22 inches and it was successfully used. It showed an incoming fog effect in the scene and it became more foggy as the filter was drawn before the camera.

Try my fog filters on miniature cameras and in fact on any camera and you will find that they produce fine results. The lighter fog filters up to No. 1 can be used at night.

PADUCAH SPOTLIGHT

(Continued from Page 13)

Junior and 18-inch spot type now in general use in the studios. The stand is equipped with lock caster to prevent moving off the object when set; also it is so constructed as to be made into a hanger when needed.

In normal position the focusing height of the Fennell Lens is 4 ft. 6 in. but can be elevated to a safe height of 8 ft. 6 in. The adjustment set screws for elevations are rearranged insuring easier locking and adjusting of stand.

The head is constructed of the best material obtainable, with a cooling chamber that eliminates heat waves. It has a 6-in. Fennell Lens which is mounted so as to give easy access to the changing of globes. The flood arrangement is easily operated from both front and back and will not shift regardless of what position the head may be in.

This lamp is equipped with a detachable arm which allows the suspension of the head from any height (from about 8 in. from floor to 8 ft. 6 in. in height). The arm also acts as bracket for hanger.

The base of this lamp stand is a casting of unusual lightness but will hold in weight approximately five hundred pounds.

All in all it is the practical result of an electrician's dream and it is now ready for practical demonstrations.

Some of the cameramen who have successfully used the Paducah Spotlight are Joe Walker, Hal Mohr, Rudolph Mate, Theodor Sparkuhl, Bill Snyder, Paul Ivano, H. Newman, Jim Brown, Jerry Ash, Charles Van Enger, Enzo Martinelli, Mack Stengler.

For further information regarding this lamp call YOrk 1300 or address Paul Philley care INTERNATIONAL PHOTOGRAPHER.

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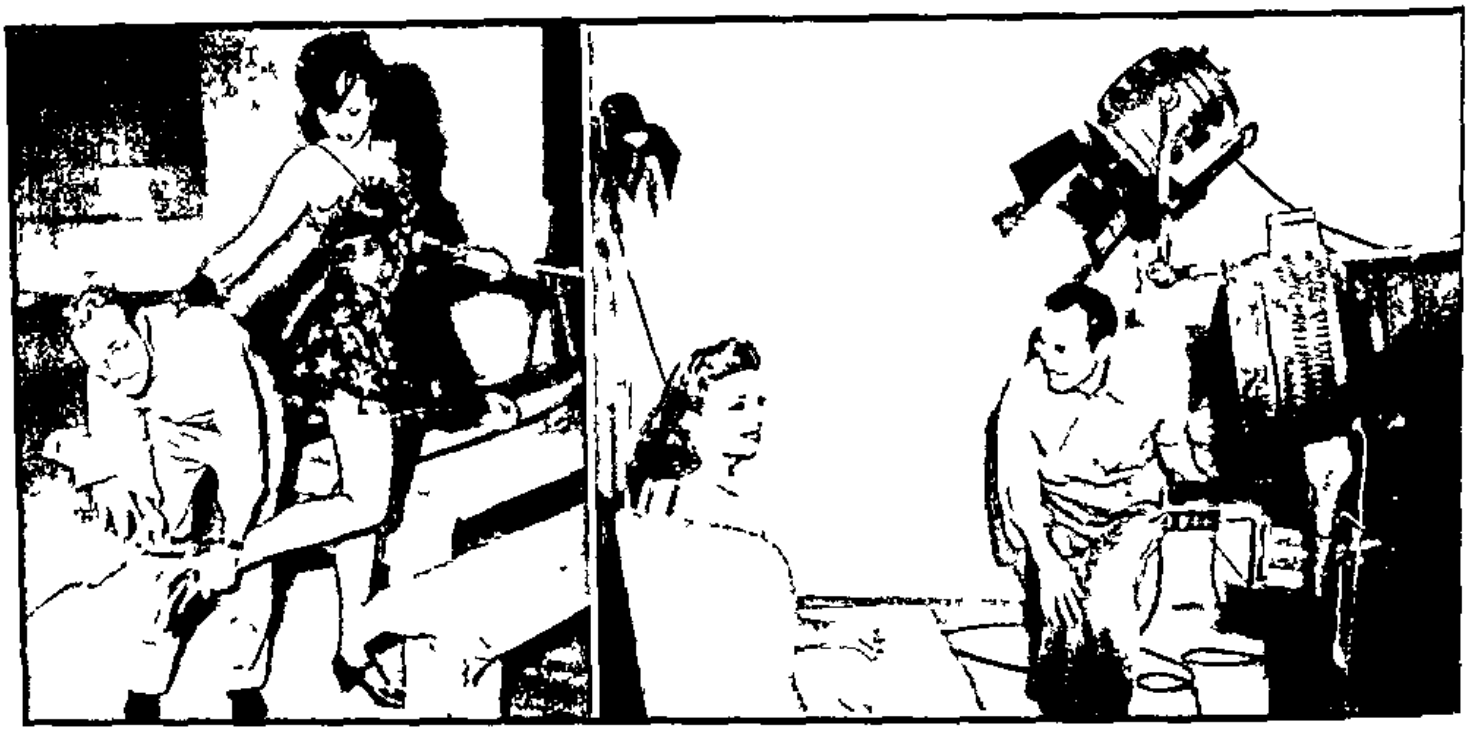
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(2000-5000-watt)
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PADUCAH SPOTLIGHT

(Continued from Page 13)

Junior and 18-inch spot type now in general use in the studios. The stand is equipped with lock caster to prevent moving off the object when set; also it is so constructed as to be made into a hanger when needed.

In normal position the focusing height of the Fennell Lens is 4 ft. 6 in., but can be elevated to a safe height of 8 ft. 6 in. The adjustment set screws for elevations are beatinged, insuring easier locking and adjusting of stand.

The head is constructed of the best material obtainable, with a cooling chamber that eliminates heat waves. It has a 6-in. Fennell Lens, which is mounted so as to give easy access to the changing of globes. The flood arrangement is easily operated from both front and back and will not shift regardless of what position the head may be in.

This lamp is equipped with a detachable arm which allows the suspension of the head from any height (from about 2 in. from floor to 8 ft. 6 in. in height.) The arm also acts as bracket for hanger.

The base of this lamp stand is a casting of unusual lightness but will hold in weight approximately five hundred pounds.

All in all it is the practical result of an electrician's dream and it is now ready for practical demonstrations.

Some of the cameramen who have successfully used the Paducah Spotlight are Joe Walker, Hal Mohr, Rudolph Mate, Theodor Sparkuhl, Bill Snyder, Paul Ivano, H. Newman, Jim Brown, Jerry Ash, Charles Van Enger, Enzo Martinelli, Mack Stengler.

For further information regarding this lamp call YOrk 1300 or address Paul Philley care INTERNATIONAL PHOTOGRAPHER.

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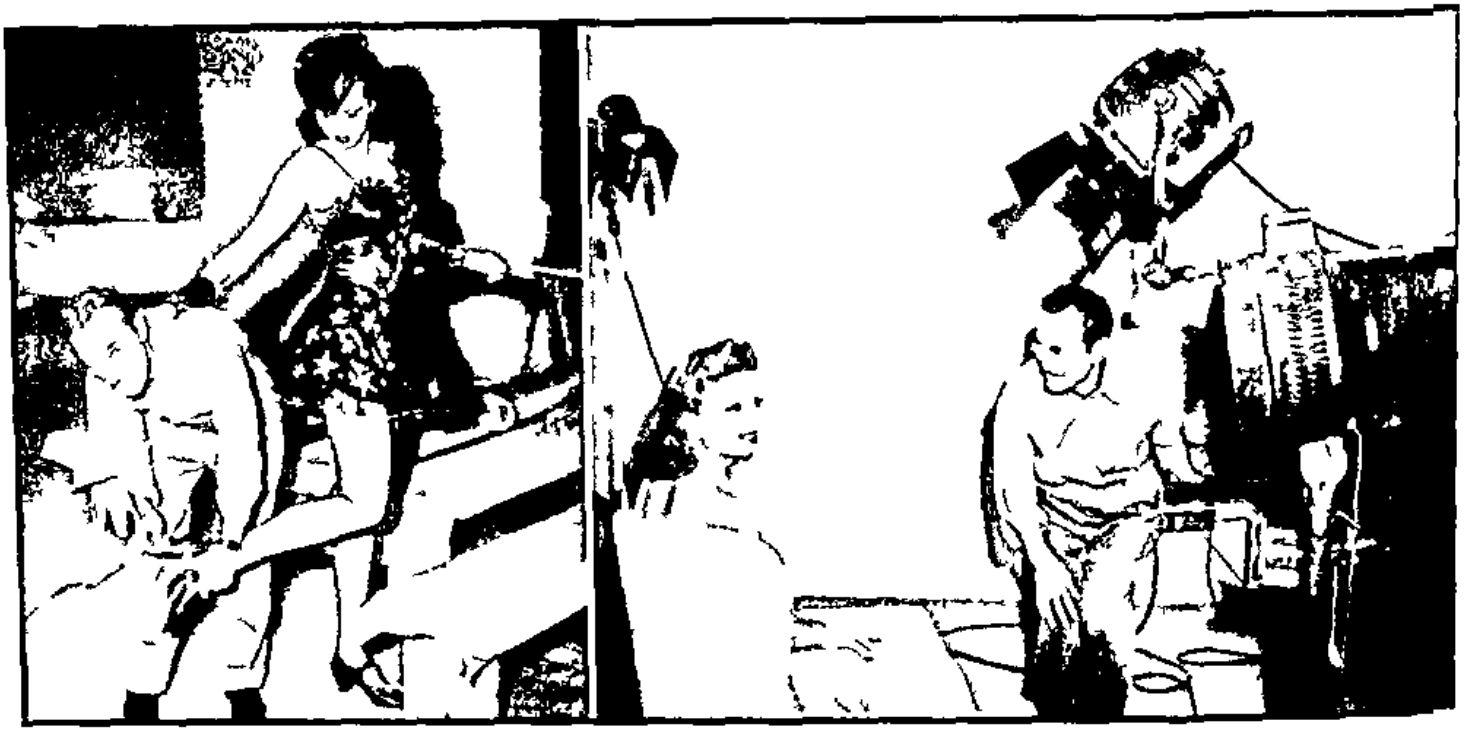
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A photographer has no privacy claims Joe Walters Republic still man who did special portrait work and publicity shots for the studio s $750 000 musical 'Hit Parade of 1941' Fred Parrish who handled production shots included in his output several shots of Walters at work One showing Joe scraping the dancing heel of Ann Miller so that she wouldn t slip as she went through a dancing routine for his speed camera was snapped by Parrish calling "Hey Joe" The other shows Walters taking a portrait of Frances Langford star of "Hit Parade of 1941" By this time Walters refused to turn when Parrish called "Hey Joe" therefore the lack of surprise look on this shot Between them Walters and Parrish shot 3 000 stills and between their demands the stars experienced little rest or seclusion



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Women's Club of Evanston, Illinois, was conducting a hobby show, and invited David to run his film They gave him a large room in which to show the picture It was advertised by the members and it soon became apparent that they were going to have a capacity crowd David asked them their permission to put up a sign to the effect that it was a real "horror' picture, and that "only those with strong nerves" should see the picture No one took him seriously, and a riot followed shortly upon the beginning of the picture A riot in the literal sense of the word, children screaming in terror, women fainting and general panic resulting from the effects of the screams in the little theatre It all wound up by the police being called to the scene in an effort to stop David from showing the rest of the picture

"Mr X" opened by showing close up of a hand about to kill someone with a knife and another hand coming into the picture and cutting the first hand off at the wrist' Hm m, I wonder if David and Orson could have gotten any ideas from each other .

David directed produced, wrote the scenario, and acted two parts, besides editing the film and picking the sound score He first got the inspiration to make OLIVER TWIST when he was attending the Lake Forest Academy and there met Howard Stafford, who impressed David as being a perfect character to act Oliver And so it was OLIVER TWIST

Quoting from the 'Program Notes" in the program passed out to the audience 'In producing the movie many amusing things happened, such as the time the cast walked into the wrong house and began dressing Another time the assistant director had to go into the lake three times fully clothed to bring out the properties Armed with lights, cameras, etc, the technical staff broke in on a wedding at a Country Club At one time a girl fell off of a low roof, causing great fright to all for fear the fall had killed her Every time Bill Sikes was ready to drown his dog, progress had to stop while a foursome went through on the golf course

From June 26 until September 5 the quiet of this lovely little suburb was disturbed by incidents as occurred on one "quiet' Sunday afternoon when they murdered Nancy Sikes drowned the dog and hanged a man from their house As David s assistant director Murie Collins puts it 'I don t know when we ve had a pleasanter Sabbath!'

Production at Warner's

● With eight pictures slated to go before the cameras within the next three weeks Warner Bros studio is swinging into the heaviest winter production cycle of its existence

Three pictures started Monday October 21 They were "Footsteps in the Dark," starring Errol Flynn with Brenda Marshall, 'The Strawberry Blonde,' starring James Cagney with Olivia de Havilland Rita Hayworth and Jack Carson and The Case of the Black Parrot," which is being directed by Noel Smith

January Heights starring Bette Davis with George Brent will begin October 28 under Edmund Goulding's direction Starting on the same day will be Bad Men of Missouri" with Ray Enright directing

'Tugboat Annie in Drydock," starring Marjorie Rambeau with Alan Hale, will begin November 7 and continue the screen careers of these characters

FOG EFFECT FILTERS

By George Schelbe

● Filters to produce fog effects got their start back in 1917 and have been very popular ever since Naturally fog cannot easily be controlled to give the photographic effect especially at night when the lights used for motion picture production and even street lights or any other illumination, shine through the fog like so many searchlights During the daytime natural fog does not show up strongly in a picture especially those taken at close range So I got busy trying my luck at making fog filters Gradually I developed various densities that satisfied the motion picture cameramen, who are always looking for some new and improved adjunct to their work

The effects obtained with these filters were ideal as natural as the real fog would be and did the trick of producing fog for motion picture film at any time during the day or night Whenever the script calls for fog the cameramen now put on the proper density of filter There's no waiting for fog, it can be had at a moment's notice Fog filters are here to stay and are becoming more popular every day Properly made, they will require no increase in exposure and will give you the kind of fog you want in your pictures

The following are the filters to be had No 1/8 and 1/4 are for early morning mist or atmospheric haze The No 1/2 is for very light fog effect The No 1 is for fairly light effects The No 2 is for medium and the No 3 for heavy effects The No 4 is for 'London fog' effects, and I have been sending filters to London, where they have plenty of fog The No 5 is a graduated type and will produce effects heavy in the distance and very light in the foreground They can be used from any side of the camera a high fog, low fog or incoming effect Any kind of an effect can be had with these filters

I made a graduated fog filter for a Hollywood studio 3 inches by 22 inches and it was successfully used It showed an incoming fog effect in the scene and it became more foggy as the filter was drawn before the camera

Try my fog filters on miniature cameras and in fact on any camera and you will find that they produce fine results The lighter fog filters up to No 1 can be used at night

PADUCAH SPOTLIGHT

(Continued from Page 13)

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The head is constructed of the best material obtainable, with a cooling chamber that eliminates heat waves It has a 6-in Fennell Lens, which is mounted so as to give easy access to the changing of globes The flood arrangement is easily operated from both front and back and will not shift regardless of what position the head may be in

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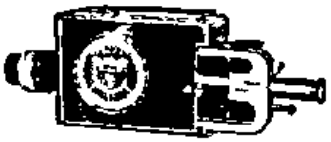
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KALART

PATENTS

(Continued from page 21)

No. 2,213,466—CINEMATOGRAPH PROJECTOR FIRE TRAP. *Thomas Edward Glynn*, Saskatoon, Saskatchewan, Canada. Appln. Jan. 3, 1938. 7 claims.

A fire stop for motion picture projectors in which a film sprocket is provided with a contact which closes when there is a fire, and this operates a solenoid which causes a knife to cut off the ignited film.

No. 2,213,531—METHOD AND MEANS FOR PRINTING MOTION PICTURE FILMS. *Carl Louis Oswald and Warren Dunham Foster*, assignors to Kinatome Patents Corporation, a corporation of New York. Original application Oct. 29, 1928, and this appln. March 21, 1932. In Great Britain Oct. 26, 1929. 22 claims.

A method of printing a sound track from a negative which consists in using a monochromatic light, which may be in the ultra violet, as a printing light.

Fred Crawford Robertson, assignor to Eastman Kodak Company. Appln. May 24, 1938. 9 Claims.

A splicing device in which fluid pressure is used to press the ends of the film together.

No. 2,213,715 — MAKING SILVER FREE THREE COLOR PRINT. *Karl Schinzel*, Rochester, N. Y., and *Ludwig Schinzel*, Germany, said Karl Schinzel assignor to Eastman Kodak Company. Appln. Aug. 19, 1938. 5 claims.

The method of forming a colored photographic image in a sensitive layer containing leuco vat dyes, which comprises sensitizing the leuco vat dye to light of the color which it is to record by combining it with an organic dye.

No. 2,213,827—TREATMENT OF PHOTOGRAPHIC FILMS. *Friedrich Johann Jacob Stock*, Berlin, Germany. Appln. Jan. 25, 1938. In Germany Sept. 23, 1936. 2 claims.

A method of treating multi layered color film in which layers containing dye images are separated from each other, whereby the separating layers are eliminated by absorption.

STATEMENT OF THE OWNERSHIP, MANAGEMENT CIRCULATION ETC., REQUIRED BY THE ACTS OF CONGRESS OF AUGUST 24, 1912, AND MARCH 3, 1933

Of International Photographer published monthly at Los Angeles for October 1940.

State of California } ss
County of Los Angeles }

Before me a Notary Public, in and for the State and County aforesaid, personally appeared Herbert Aller who, having been duly sworn according to law deposes and says that he is the Managing Editor of the International Photographer, and that the following is, to the best of his knowledge and belief a true statement of the ownership management and if a daily paper the circulation), etc., of the aforesaid publication for the date shown in the above caption required by the Act of August 24, 1912, as amended by the Act of March 3, 1933, embodied in section 537, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor and business managers are:

Publisher, International Photographer, Los Angeles, California. Editor, Herbert Aller, Los Angeles, California. Managing Editor, Herbert H. Aller, Los Angeles, California. Business Manager, Helen Boyce, Los Angeles, California.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and address of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company or other unincorporated concern, its name and address, as well as those of each individual member, must be given.) International Photographers, Local 659, International Alliance of Theatrical Stage Employes and Moving Picture Machine Operators of the United States and Canada, 6461 Sunset Blvd., Hollywood, California. President, Hal Mohr. First Vice President, Leon Shamroy. Third Vice President, William Skall. Financial Secretary-Treasurer, William Reinhold. Recording Secretary, James V. King. Sergeant at Arms, Len Powers.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

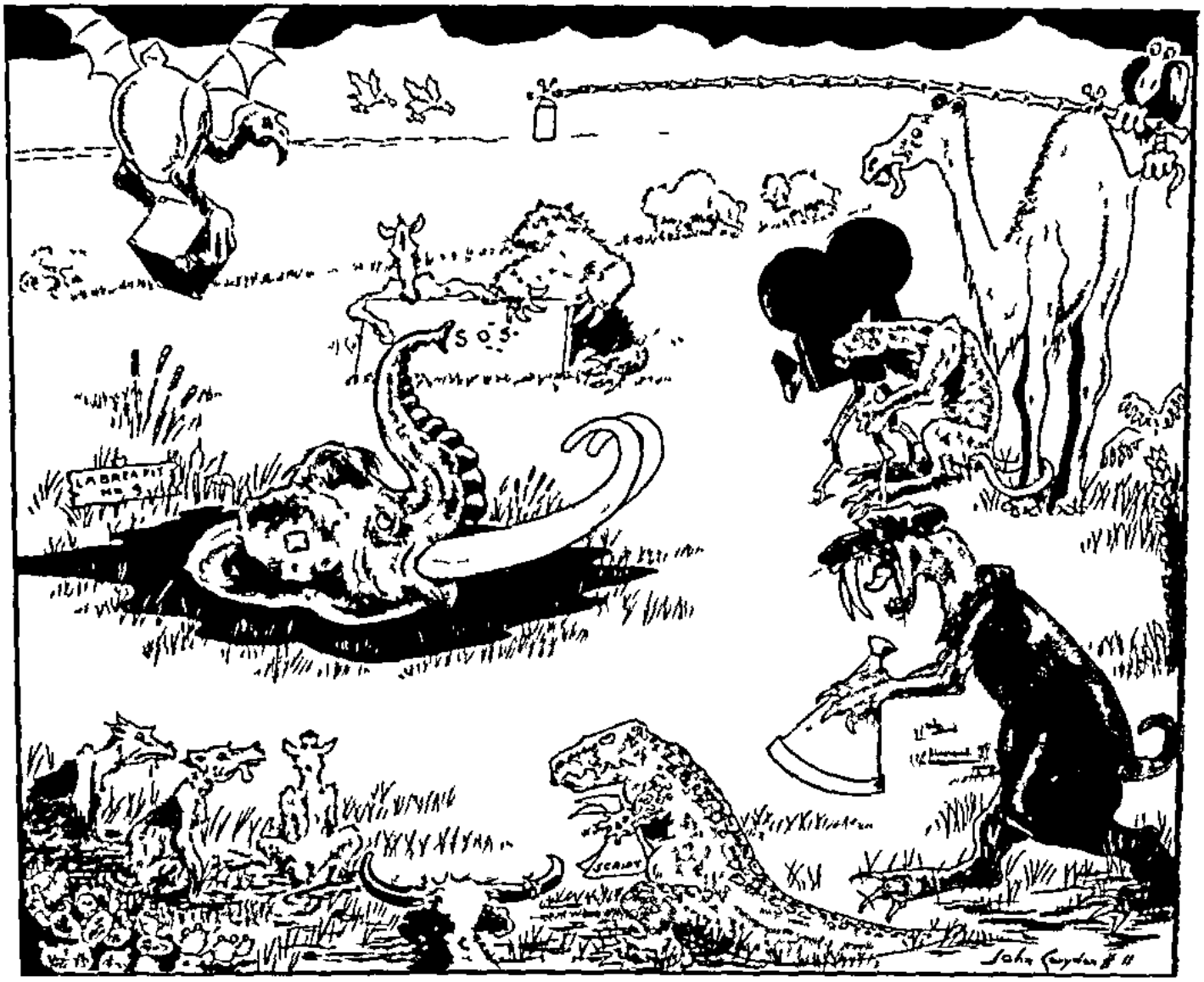
5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the twelve months preceding the date shown above is. (This information is required from daily publications only.)

HERBERT ALLER, Managing Editor.
(Signature of editor, publisher, business manager or owner)

Sworn to and subscribed before me this 30th day of September, 1940.

HAROLD V. SMITH, Notary Public.
(My commission expires March 7, 1941.)

(Seal)



prehistoric hollywood

The veterans of every successful industry are wont to foregather and live over again its early days Much of this history would make excellent reading for the public but alas these inconsiderate old birds seldom can or will put into writing the words they so eloquently utter

Feeling that something should be done about it that the deserving layman should have that which he deserves your art editor has galvanized his more or less nimble imagination into depicting a conception of what might have been when the moving picture industry was in a state of nebula and its capitol yet unnamed

Doubtless a reserved seat up where the television studio is being erected would have afforded a grand view of stage and setting for the ever moving drama The far flung Cahuenga Valley lush with tropical green its glittering but treacherous lakelets, its teeming life of species long since vanished

It is easy to fancy this a vast stage its creatures the actors heavy villains light comedians slothful clowns leading men and women directors script girls camera crews and extras without end The Hoover Dam then undreamed of its sets lighted by Nature's lamps

Where Highland Melrose La Brea and Sunset reek with superheated traffic the Chaplins the Pickfords the Clark Gables and the Marlene Dietrichs of that day strutted their stuff

On the towers and minarets neon signs and fire escapes roosted gigantic gaunt and smelly birds of prey Giant sloths nonchallantly bedded themselves down for the night on Hollywood Boulevard halting big red cars and necessitating detouring on foot by exasperated passengers Sabre toothed tigers lurked behind fireplugs and loafing on corners laughing hyenas ribaldry added insult to injury Those were trying days yet tempered with comedy

But out on Wilshire Boulevard was real tragedy no acting there Ever and anon throughout the centuries the La Brea asphalt pits sucked down their unsuspecting victims young and old mammoths and pygmies birds animals and creeping things

At the first agonized shriek of alarm we imagine came futile rescue crews, came the cameramen with their microphones came news and stillmen came hordes of extras came sympathizers and idle onlookers Useless words of advice flew like curlews But, the only comfort the wretched victim could get out of it was the hope his neatly polished bones would look swell when mounted in the Los Angeles Museum for unborn generations to marvel at and doubt

Oxygen Tanks on Location

Oxygen tanks made their first appearance as standard equipment for movie making last week

A huge supply of the gas was shipped from Hollywood to a Universal location company filming exterior scenes in the Mother Lode mountain country for 'Trail of the Vigilantes'

Extreme high altitudes in which the company worked necessitated the oxygen Accustomed to low altitude Franchot Tone Warren William Broderick Crawford Andy Devine Mischa Auer Peggy Moran and other members of director Allan Dwan's troupe quickly ran out of breath in filming action scenes

When this happened a few inhalations from the face cone attached to each oxygen tank brought the players back to normal

The mountain peak altitudes ranged from 7 000 feet to as high as 12 000 feet



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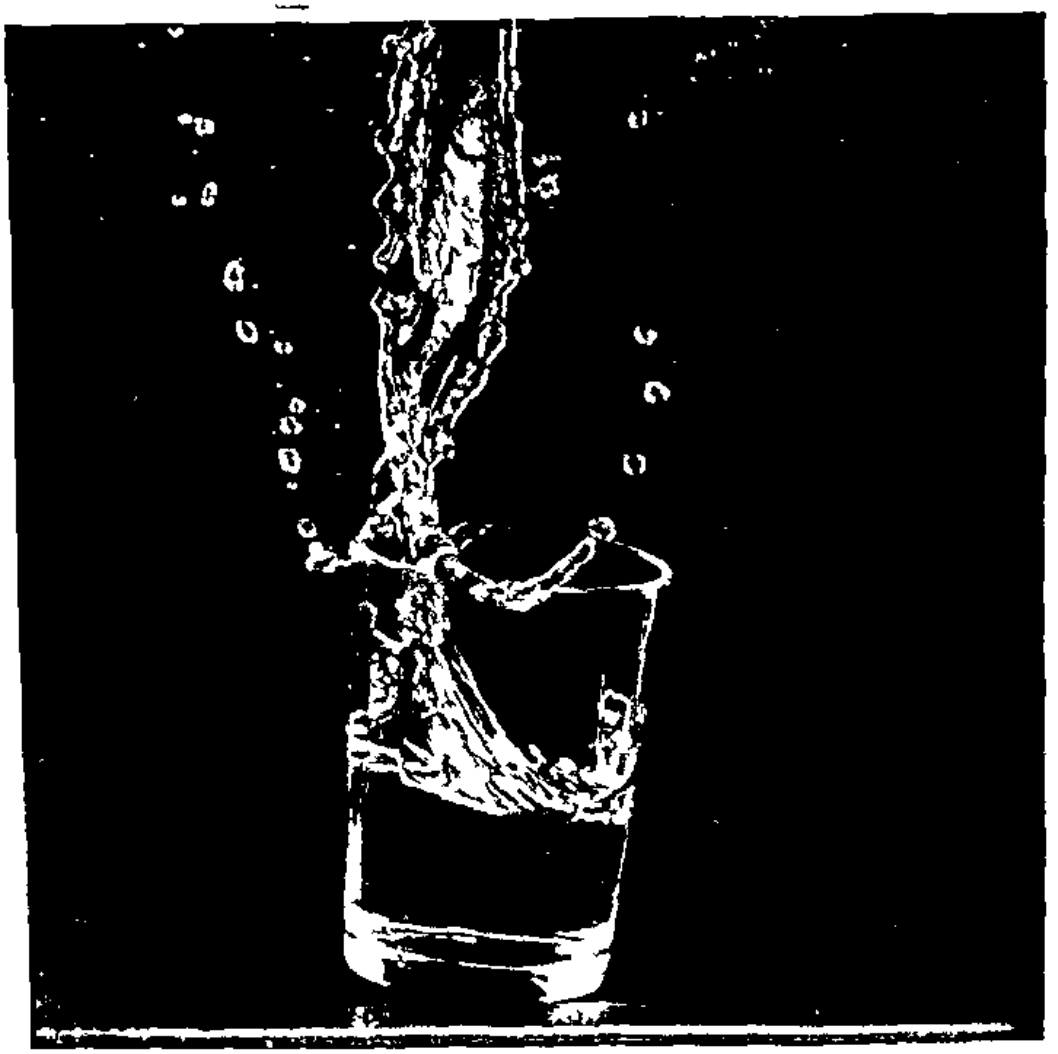
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UNIVERSAL'S THRILL HUNTER IN CHINA

By George Krainukov,
Universal Newsreel Staff Cameraman

Krainukov the author of this article has spent the last nineteen years in China (the last ten years for Universal Newsreel) covering floods famines wars vendettas and on many occasions he seemed to lead a charmed life so miraculous were his escapes Several years ago after the bombing of the Cathey and Palace Hotels "Time" published Krainukov's photograph with the caption underneath "George Krainukov's pictures were the most gruesome of them all" When a bomb hit the entrance of the Cathey Hotel and another the roof of the Palace Hotel he was wounded with a fragment, but kept on grinding until he got the complete story Dozens of times he has been under direct machine gun fire, bombings, explosions and what not and always seems to have returned with the story

Krainukov says "The Newsreel cameraman leads the most thrilling life of any artisan today He must think quickly and accurately and must face the world's greatest dangers calmly—and eagerly" He has done just that

When the dark and gruesome thunder of war looses its ominous growls over vast plains of death heroes are molded from the most common of clay Love of home love of homeland perhaps even love of their gods transforms men into individuals who fear not death but only dishonor Inspired by such all-compelling motives as love patriotism or religion death is naught but constant comrade One brief moment of glory and memory of how they passed in the minds of those they served the dying deem recompense enough

But what of the unsung heroes those who hold no passion for either side, whose presence on the far flung theatres of battle is not by choice but of necessity whose purpose is not to fight but merely to record that the world at large may see be entertained perhaps—be amused?

I speak of the newsreel cameramen To paraphrase 'Theirs not to reason why theirs but to go and try to get the picture' Whether it be in the vermin infested fever ridden foul pest holes of Ethiopia where sanguine butchery seems to have been a pastime on the high perched deadly plateaux of Spain or in the seething vortex of nations that is the Orient the aim is the same GET THE PICTURE! For a few fleeting minutes we see the results on a screen of our neighborhood playhouse and are appropriately appalled at the conditions and events portrayed

But what of the men who got the pictures?

Since I left China on my vacation to America many people approached me to write articles of my experiences in China as a newsreel cameraman give lectures or even to write a book Well I never thought of that and beside I was too busy covering events for the last nineteen years which I spent in China cranking a motion picture camera all over the country and chasing hot news in floods famines wars and bandit vendettas to be flashed across the silver screens the world over There are many fascinations in the newsreel game despite the innumerable hardships I have gone through during that nineteen years of turning a camera crank

The story of my career as a newsreel man is packed full of thrills and being born an adventurous Russian I enjoyed all of my manifold experiences even when my life hung on a thin thread Whenever there was a war, be it Japanese, anti communist or what have you, I was to be found cranking my machine somewhere behind



Upper: Krainukov on the front line with the Japanese Army;
Lower: With the Chinese Air Force







the lines registering on celluloid history in the making

Starting as a volunteer in my father's 12th Siberian regiment I fought Germans for two years, when on a military assignment I was caught in the midst of a Russian revolution in St Petersburg the capital of Russia I was forced to shoot policemen and counter revolutionists Discarding my rifle I drove a car but one night being suspected as a counter revolutionist—my car was riddled with thirteen bullets my lucky number ever since Escaping uninjured I quickly made a decision that the front lines were much safer than the main street in the Russian capital and so I found myself again fighting our enemies

Civil war and retreat of the armies found me in Vladivostock in 1918 where

George Kraimukov, Universal staff cameraman, shooting Shanghai street scenes

I joined the Y M C A motion picture department and got my first experience in handling a Pathe movie camera However the arrival of the Red Armies in Vladivostock landed me in Shanghai China There I started as a cameraman on the staff of the British American Tobacco Company Soon after my arrival in China I was initiated into the newsreel profession which became my life work During the days while I was with the B A T which at that time was producing 'shorts and news pictures to aid their advertising department I traveled all around the country in search of news

In 1925 I joined a scientific expedition into the jungle of Fukien under the well known explorer Mr Floyd T Smith of the Field Museum of Natural History Chicago It was during this trip that I tasted the first of the adventures of a newsreel cameraman

Fleeing into the International Settlement

when we were captured by bandits while on our way up river from Foochow to Yenping It was the hard bargaining with the bandit chief that finally set us free on the payment of $200 00 instead of $2,000 00 However we struck bad luck and were captured again a week later High in the jungle mountains in an abandoned Chinese temple where we were imprisoned I managed to get away with my D Brie camera tripod Graflex and two rolls of spare film Did I run? I think I have beaten all the running records existing at that time coming to Yenping soaked through with perspiration and with blood all over my shoulders from carrying the heavy equipment

I also photographed the first real war pictures ever filmed in China when in 1924

Dead and injured on Nanking Road in front of Palace Hotel

I "shot" scenes of the hostilities between Marshal Wu Pei fu and the late Marshal Chiang Tso lin the war lord of Manchuria The great Yellow river flood was covered in North China in an old Vimy Vickers twelve passenger plane the first pictures ever made in China from a plane The same flood afterward was covered in a small junk We were caught in a storm bitten by myriads of mosquitoes and finally I contracted "Hongkong Foot" disease from which I was unable to be freed for six years

Then the eventful year of 1927 rolled along I was connected with Paramount News and was busy with my camera taking various scenes of the Nationalist campaign I was on the spot with Merl La Voy when the victorious pro Nationalist General Yen Hsi shan's troops took Peking the old capital of China I could never forget the scenes I took of the hungry barefooted

Kraimukov in front of the "arch" in Nanking

marching Chinese soldiers, exhausted by endless hours of marching under the scorching Peking sun picking up pieces of ice from the dusty road fallen from a passing ice-cart to quench their thirst It was here that I first met James Shackelford friend cameraman connected with Roy Chapman Andrews Expedition and now after fifteen years I have had the pleasure to again renew the acquaintance

In a snow storm in December 1929 I was tangled up in the Pukow military mutiny and looting by General Hsi Yao-shan's troops Night came and with a heavy blizzard from up-river driving sleet and snow With practically no warning the troops in the sheds arose in rebellion Their loyal

Another scene of "Bloody Saturday" bombing before the Palace Hotel Kraimukov was saved because of standing at extreme left

officers they killed or drove them into the storm They flowed through the sheds breaking up all freight and opening all cars they rolled out over the native town killing and robbing everyone they met Three Chinese officers and eight bodyguards and myself were disarmed robbed of everything we had roughly handled and threatened to be shot Jumping from the train and running under cars in the Pukow yard with rebels spraying us with bullets we soon came to safe ground and before the soldiers attempted to storm the Belgian steamer Carlier Captain F H Peret admitted me and four Chinese on board What happened to the others I never learned

Mutineers took all my money personal

Taken from the entrance of Cathey Hotel, where the bomb struck On the opposite side is the Palace Hotel

belongings stole or destroyed two of my motion picture cameras and equipment. Then the soldiers decided to gut the steamer They came down in hundreds, but were "outfaced" by the thin but grim line of armed Europeans that barred the way So wrecking the gangway they proceeded to less dangerous spots When they were satisfied with loot and killings they commandeered all rolling stock in the yards forced the railway employees to run the locomotives and proceeded to a point 15 miles from Pukow where they entrenched and were displaced and broken up by loyal Nationalist Nanking troops a few days later Meantime Captain Peret had shifted to a safer point going down stream and anchoring For that experience a well known Yangtse River Captain Joe Meclo (who was a few years later killed and thrown overboard by the Yangtse river pirates) gave me a name of the Grand Duke of Pukow

Then came the Great Yangtze River Flood of 1931 There were more than 300,000 dead A frantic rabble clawed itself to pieces to get out of stricken Nanking and I feasted that rush of water and humans to record the disaster Having sent a call for help I stuck in the flood area taking my pictures until the water was up to my chest even when I perched on the roof tops. My faith was justified In far away New York Mr E. Cohen my editor had managed to charter a Chinese seaplane to find me amid the yellow waters of the Yangtze It arrived in time to take me to safety and to speed the film toward the world's screens The pictures were exclusive for the Paramount News Many cinema goers will remember news pictures of the greatest disaster that had happened to China since the Yellow river changed its course Millions of people were drowned, millions more rendered homeless and starving Help poured in to China mostly from America

Earthquakes in Formosa in 1935 provided another five exciting days. The North Eastern region was being devastated and after flying from Shanghai to Foochow and then by tiny coastal boat across the stormy sea to Tai Hoku the capital of Formosa, I set out on foot walking from town to town and taking pictures as I went Roads and bridges disappeared after I had crossed them and I would never have gotten back to Tai Hoku but for the guides who accompanied me to each town or village leaving me there in the hands of another guide who knew the immediate district At night I slept in little hotels which were made of wood owing to the country's frequent earthquakes The weariness engendered by my long daily walks carrying heavy equipment under the scorching sun made me immune to any alarms, and I slept soundly every night whilst the earth rocked beneath me and buildings fell to bits in the village My only fear was that the peculiar wide heavy mosquito netting in use there might fall on me, and envelop and strangle me

In 1931 I joined Universal Newsreel and from then on events were moving fast in China Starting with the Mukden "incident" that set the world ablaze, I photographed nearly every phase of the historic events which reached their climax with the fall of Shanghai Nanking Canton Hankow and the continuous bombing of Chungking

But not all the credit should go to the cameramen the major part should be given to our editors They have to be able to set us down in a Mongolian famine or a first class war, and I know that whatever the trouble is we go in and get the pictures They've got to have confidence in us, and we've got to have confidence in them We've got to know that they appreciate our trouble and our dangers We've got to know that whatever jam we get ourselves into for them, our editors will work intelligently to get us out. One editor said "You can't make your men burn incense before you They've got to know they're working *with* you and not *for* you if you get the results" And it is with this feeling that we cameramen dash into the thick of dangerous situations.

Often I lived with Chinese and Japanese troops camping with them, riding beside them lying side by side with them shooting the news whilst they were shooting each other Then came the Sino Japanese war of 1932 and the "Hongkew Park" bombing when several high Japanese Generals diplomats and other officials were seriously wounded One of them Admiral Nomura now Ambassador to America lost his eye in that bombing of which I got exclusive pictures. General Shirokawa Commander in Chief of all Japanese armies in China died of wounds Shigemitsu, now Ambassador to Great Britain lost his leg and others were severely wounded The bomb was thrown by a patriotic Korean who was caught at the spot What happened after the bomb exploded, I leave to the imagination of my readers And yet, *I not only got the bombing but took two* hundred feet more of the pandemonium and was able to get out of the park with my precious film with the park surrounded by angered Japanese soldiers who would shoot anyone at the slightest provocation

The Sino-Japanese war that started from the "Marco Polo Bridge" or as Chinese called it "Luockochiao" I fought a chain of important coverages during which I was twice wounded Once when I walked from the Chinese lines to the Japanese through "NO MAN'S LAND" The second time was during the bombing of the Cathey and Palace hotels on Nanking road, the main street of Shanghai. The American magazine "Time" in its issue of September 13th, 1937 published a photograph of me Underneath it was the rather peculiar compliment George Krainukov's pictures were the most gruesome of them all"

Once I was standing on the corner of the Bund and Nanking road watching two silvery objects dropping from a bomber A few seconds later the bombs struck One hit the entrance of the Cathey hotel and the other hit the roof of the Palace hotel I was wounded in the knee by a fragment of the bomb and hit in the back by the bloody mutilated body of a Chinese who had been killed I was soaked all over in hot blood This perhaps saved my life I turned around and got the complete story For this the editor of Universal Newsreel sent me a substantial bonus and in their caption sheet Volume IX, Number 595 called "The Scoops of Scoops, they wrote " George Krainukov wounded by a bomb fragment Universal's intrepid cameraman stood up under fire and kept on grinding so YOUR screen might be enriched by the most spectacular scoops of the century! The whole New Universal organization is proud of you George!

There are many interesting and fascinating things to write about that would fill the whole book Suffice to say that I have been dozens of times under direct machine gun fire, bombings explosions *and what* not Press association once said 'George Krainukov, Universal Newsreel Staff Cameraman in China is coming to be known as the luckiest man in China And indeed he does seem to bear a charmed life Universal Newsreel today shows the first scenes of the capture of Shanghai which Krainukov took under the most dramatic circumstances and at the eminent risk of his life Two of his companions on the roof of a 75 foot water tower in French Concession were hit by machine gun bullets which probably were fired at Krainukov's camera, yet Krainukov escaped without a scratch and even filmed the removal of his killed companion the British war correspondent Pembroke Stephens"

In Nanking when huge Japanese bombers droned over the Nationalist capital dropping a hail of high-explosive missiles as Tokyo acted to execute its threat to *destroy the city I cheated death* by inches as one of the Japanese raiders fell in front of my camera damaging my car I stood there by my camera recording the most ruthless air raid in the history of the world up to that time With me on the roof were famous and daring cameramen Eric Mayell Arthur Menken who took the danger as a matter of fact While another ace cameraman "Newsreel Wong" in Shanghai was covering his famous story of the bombing of the South Station

I have been shooting a news camera for the last nineteen years and I have taken hundreds of thousands of motion pictures of Chinese life and Chinese strife from Shanghai West to the far interior of Thibet North China and Mongolia and to the French Indo-China The distances to be cov-

ered were great and often New York send ing me on assignment, would think I could be there in a day or two, when it took me sometimes weeks before I could reach the place

During political unrest and constant changing of armies and due to the manner in which the various scenes that I photo graphed of Chinese war were used, with commentary entirely sympathetic to the Chinese people, my life became endangered because my pictures were undisputable proof of what was taking place and natur ally forces opposing the Chinese could not have a very warm spot in their hearts for me, so I decided that it would be longer and healthier for me if I made my home in America, because when the insur ance company in Tokyo began selling poli cies issued in time of 30, 60 and 90 days it was time to go some place and that place was not Shanghai

In the latest occupation of Shanghai passes issued in the previous war by offi cers that now occupied commanding posts were useful It was lucky for us that they used the same officers in both wars

However, those were the most exciting, destructive and yet most comfortable wars we ever had Days in the trenches and nights in hotels and clubs with fellow cam eramen or journalists such as Joe Rucker of Paramount, Eric Mayell of Fox Movie tone Ariel Varges, Bonny Powell who took hand to hand fighting from the 'Doomed Battalion" Newsreeler Wong who nearly lost his head but escaped to Hongkong, A Alexander with Tappen poor fellows who lost their lives while on the job, Paul Heise, ever smiling and friendly, big husky Mervyn Freeman who crossed the ocean to work in the war in 1932, Floyd Gibbons, the one-eyed re porter Howard Winner, young and brave cameraman who was replaced later by an other ace, Norman Alley who photo graphed the sinking of the Panay Yes that was a great time and fine men we had there!

Political situations in China make my work there now more dangerous than ma chine gun bullets or bombings and so my company granted me home leave" But I have no home Thanks to my many Amer ican friends who helped me to get an immi grant quota visa, now I am here In God s country where people are free and friend ly My immediate plans are indefinite However, it doesn t matter What does mat ter is that I am on American soil that I am in a free country and my wife and I are very happy What may happen to us is all in the hands of God and our good friends I know only this that someday I ll find my little place under the friendly sun in America and here hope to make my home and be a good American citizen—a home in the country that I always have dreamed of

SWORDFISHING WITH SHACKELFORD



Shackelford and his party off Piercy Rock, northwest New Zealand It was here they caught the record swordfish of the trip This rock juts up 400 feet out of the sea with nearly perpendicular sides Seamen claim they have sighted with field glasses the Tuatara lizards on the two-acre flat top This dinosaur-like animal is the oldest living creature on earth

Floods End Plans for Underground Premiere

Warner Bros has been obliged to cancel its plans for a premiere of "Underground" in the Carlsbad Caverns, New Mexico The studio has been notified by the Federal Government that flood waters inundated portions of the caverns and that the huge underground auditorium could not be dried completely before June 28, the date set for the film s national release

Fox Purchases "A House at Peace"

A brilliant new novel on present day England, "A House at Peace," was pur chased by Darryl F Zanuck, 20th Cen tury Fox production chief from Charles Morgan, noted British author

The novel bought as a vehicle for Henry Fonda, tells of England in the war, al though there is no conflict in the story It reflects the feeling of the war, how it was broken and disarranged the lives of all the people in England









Starring Gloria Swanson and Adolphe Menjou

"Father takes a wife" - and it's Gloria

Since Gloria Swanson left pictures in 1933 to engage in the manufacturing business, until her return in RKO Radio's currently filming "Father Takes a Wife" there has been no change in her film appearance except her eyes.

But that change is due to change in photographic film according to Ernest Bachrach who photographed the star for seven years and is again her official portrait man.

"Formerly when we used orthochromatic film," Bachrach explained, "Miss Swanson's eyes photographed light grey. Today with the use of panchromatic film her eyes are considerably darker—but still as luminous.

"Otherwise the same exotic quality, the cooperation in posing and the photogenicity are still there."

As the Swanson swept before the clicking cameras at RKO last week in a cloud of white bridal chiffon 250 blase showhardened movie extras suddenly went popeyed then berserk with a spontaneous burst of cheering.

A sincere tribute which Gloria knew how to accept—with the proper admixture of graciousness and savoir faire.

The incident, as much as anything else indicates the universal affection Gloria Swanson has had since she became a screen glamour star the kind of affection given only to Wally Reid, Rudolph Valentino and Will Rogers.

As far as externals go she might have left Hollywood only last week instead of seven years back.

Wherever the distinguished French clothes designer, Rene Hubert, went in Hollywood, Los Angeles and Beverly Hills when gathering together accessories for the *$10,000 eighteen-change wardrobe for* Father Takes a Wife, tradesfolk were similarly all aflutter. Many were the personal and endearing messages they asked Hubert to deliver to Gloria.

More than 500 telegrams arrived at the studio from astute exhibitors throughout the land congratulating RKO on the casting coup—and asking for booking dates.

Work at the Melrose-Gower film plant was practically at a stand-still that morning. Miss Swanson worked before the cameras for the first time. Not only the secretaries wanted to see the famous star, but the entire contract list of stars and leads wanted a first, or another peek at Gloria.

She's marvelous—was the unqualified consensus of opinion everywhere, especially from the boys and girls of the press who were among the first in the goggle-eyed rush.

Perhaps not all the interest was centered in Miss Swanson. The teaming of Hollywood's two most famous clothes horses, Gloria Swanson and Adolphe Menjou, is a fashion world event in itself.

The two play the title roles in "Father Takes a Wife" which is a reverse English story of matrimony by Herbert and Dorothy Fields.

As a glamour stage star a made-to-order role for Miss Swanson, the wardrobe is all inclusive—a negligee evening gown and wrap, traveling outfit with fur coat, evening dress, hostess gown, dressing gown, afternoon outfit, traveling outfit and fur coat (another one), slacks for a boat scene (first time Swanson has worn them), gymnasium costume, luncheon outfit.

Street ensemble, dinner dress, evening gown and wrap, night dress and negligee, afternoon dress, another street ensemble dress for day wear. In all eighteen layouts—costing plenty.

Of late as president and general manager of Multiprises, Incorporated, a concern in Queens, New York, Miss Swanson hasn't been idle. It took a script like Father Takes a Wife" being directed by Jack Hively to draw her to Hollywood again.

"One day I was reading the scenario sent me by RKO," said the actress, "and without much enthusiasm or hope—when suddenly it dawned on me that the story was my story and the chief character my own self. I was sold."

She was born in Chicago, Illinois, March 27, 1898. Her father was a Captain (later a Lieutenant Colonel) in the United States Army. His name, Joseph Theodore Swanson.

Because of the continuous routine change of stations *little Gloria received schooling* in sixteen different army posts—in Chicago, New York, Porto Rico, Key West, Florida, Utah, Mexican Border and other places.

Gloria's earliest ambition was to be an artist. To further it she attended the Chicago Art Institute at the age of 14 and attracted considerable attention for her black and white sketches.

At the age of 15 her aunt took her on a visit to the old Essanay Studio in New York. Greta Holmes was starring in the picture and the director, a friend of the aunt's, gave the youngster a bit in the film—just for a lark.

Her striking beauty photographed so well, so amazingly well in fact that Essanay signed her on a long term contract and starred her in Elvira Farina and "The Meal Ticket."

The following year she went to Hollywood with her mother and made a number of comedies with Mack Sennett and Keystone in which she co-starred with Bobby Vernon and other celebrities.

Next she signed with Triangle and starred in "Her Decision," "Every Woman's Husband," "Wife or Country," "Secret Code," "Station Content," "Shifting Sands" and "Smoke."

Her work attracted the attention of C. B. DeMille and under his direction she soared to fame—in "Don't Change Your Husband," "For Better or Worse," "Male and Female," "Why Change Your Wife?" "You Can't Believe Everything" and "Affairs of Anatol."

After three years with DeMille she signed with Famous Players and made a string of successful vehicles among them "The Great Moment," "Under the Lash," "Her Husband's Trade Mark," "Beyond the Rocks," "The Gilded Cage," "The Impossible Mrs. Bellew," "My American Wife," "Prodigal Daughter," "Bluebird's Eighth Wife," "Zaza," "The Humming Bird," "Society Scandal," "Manhandled," "Wages of Virtue," "Madame Sans Gene," "Coast of Folly," "Stage Struck," "Untamed Lady" and "Fine Manners."

In May 1926 she joined United Artists to produce her own pictures. The first of these was "Loves of Sonya" in which John Boles made his screen debut as leading man. Then came "Sadie Thompson," "The Trespasser," "What a Widow," "Indiscreet" and "Tonight or Never."

In 1933 she made "Perfect Understanding" for a British film organization and returned to the United States in 1934 to Fox and again teamed with John Boles *in* "Music in the Air."

Few stars have had such a long and sustained and successful acting career. Fewer have so well personified glamour and worn clothes. She is five feet one and a half inches tall and weighs 110 pounds. Has dark brown hair and remarkably brilliant eyes of deep sapphire blue. She has many friends of long standing. Hates loneliness and has an unreasonable fear of the water. Likes having people in—and her delightful afternoon teas have become legendary in Hollywood, New York City or wherever she happens to reside.

Devoted to tennis and to dogs. Has three children, Gloria, Joe and Michele.

Loves flowers, plays hunches, rides like the wind—a left over from her army days at cavalry posts.

ANIMATED CARTOON photography

By John W Burton



The author of this article

A far cry from the glamorous conditions of Class A feature production animated *cartoon photography undoubtedly is no* mystery to most of you but for those who never have had the pleasure of being in a cartoon studio a few words of explanation

Those of you who are familiar with the subject know that motion pictures are photographed at the rate of ninety feet a minute which is exactly twenty four frames a second The film thus obtained gives a photographic record of progressive positions of the action

In animated cartoon production this procedure practically is reversed We analyze the action to be photographed then make a series of cartoon drawings representing the number of frames of film required by the timing we want. These drawings are painted on clear sheets of celluloid and photographed in their proper sequence over a background that has been painted to represent the scene or setting The result is a strip of motion picture film of progressive cartoon drawings that give us the illusion of motion when projected

Our cartoon camera cranes are constructed so that the camera is suspended from above the photographic field which *is like a table surface equipped with a* glass plate operated by air pressure to hold the celluloid drawings flat over the background Bell & Howell cameras are used equipped with a stop motion drive and are set on a worm gear which allows the cameras to be raised or lowered permitting the cartoon equivalent of "truck shots In certain shots to give the illusion of following the action or "panning, long backgrounds are made and between each exposure the cameraman moves the background a certain predetermined distance

In cartoon photography the cameraman must be gifted with a great deal of patience as well as a very methodical mind as each exposure requires an accurate set up For example in many scenes in addition to seeing that the camera color filters take up etc are operating correctly he must remember to change the drawings correctly according to their sequence move the background the required distance for pan shots truck the camera up or down follow focus as well as possibly changing the shutter each frame should he be fading or dissolving Each cartoon has about 12 000 such exposures This might explain why most of us boys seem a bit tetched in the haid"

For various camera and optical effects used in production the camera department has accumulated an amusing variety of home made trick lenses For such effects as used in water scenes, heat effects and in shots requiring special distortions a collection of glass dishes bottles bowls and pieces of window glass some treated with solutions and others warped after heating have been acquired making a rather unusual assortmnt of optical equipment

Some animation that should be quite lifelike or human in its action presents a rather difficult problem of analysis which we often overcome by actually photographing human actors and actresses going through the action to be done later in animation This gives us our only excuse for occasional location trips as well as providing the opportunity to keep our hand in" with regular production equipment The motion picture film of this human action is used by the animators to analyze and otherwise assist them in the animation of the cartoon characters Some of these shots have *been quite interesting* For instance the strip tease sequence in the cartoon Cross Country Detours and the bubble dancer in the picture "Hollywood Steps Out

Several color cartoons have been produced by Mr Schlesinger that have incorporated the use of actual motion picture sequences in conjunction with animation This offered an interesting problem as Technicolor cartoons are photographed on a single strip of negative with the three color separations for each frame in successive order while regular Technicolor pictures use three separate negative strips This makes impossible the intercutting of cartoon Technicolor and regular Technicolor *To use the regular Technicolor in*

(Continued on page 25)



Henry H ("Smoky") Garner and Manuel Conral at work in Leon Schlesinger Studio

PARADISE SOUTH

By Burr McGregor

At Xochimilco centuries of romance still lingers under the bright sun that looks down upon "The Place of the Flowers," Mexico's famous paradise of flowering beauty, a short ride south of the Mystic City.

Way back in the thirteenth century one of the Nahuatlac tribes, the Xochimilcas, were vanquished by the savage onslaughts of the invading Aztecs, who in turn were driven back by a powerful chief, Coxcoxtle, into the far reaches of the reed growing shores of a lake where they survived by constructing "Chinampas" great floating masses of reeds and brush, laced and intertwined, and covered with earth upon which the builder placed his tiny shelter hut and planted his crop in the earth of his floating garden.

Increasing in numbers, the gardens floated out upon the surface of the lake, to be pushed about and bumped together as willed by the vagaries of the changing winds until a way was devised to hold them apart.

Long green willow and poplar poles forced through the earth matting around the edges of the "island" into the bed of the lake, the poles took root anchoring the little "islands" separating them with waterways and canals between. As the waterways became clogged they were dredged and the accumulation of silt and vegetable matter thrown back on the "island" increasing its fertility and lowering it until it became permanent.

Thus, in time, each island garden was bordered with slender graceful willow and poplar trees of brilliant green foliage, spreading cooling shadows across the gardens and waterways with their intertwined roots building a bulwark against the erosion of water action and lapping waves from passing boats to and from neighboring gardens and growing markets.

Xochimilco was one of the most stubborn and bitterly contested strongholds of the Aztecs to be conquered by the Spaniards. Fighting was ferocious on both sides with fearful slaughter.

For a trifling charge we engaged a comfortable flat bottom square blunt-ended canopied boat, propelled gondola like by a handsome bronzed descendant of the proud Aztec race, tall lean and broad shouldered, courteous and pleasantly indifferent whose dark eyes danced and sparkled as he pointed out the island gardens that have produced in abundance since the days of his forefathers luscious fruit berries and vegetables and fragrant, exotic flowers of wonderful bloom and color.

Lazily, dreaming of romance we floated through the morning along the smooth waterways till noon and our boatman propelled the craft into an indenture of a garden bank. He hailed one of many other craft of musicians and one of a kind propelled by a comely native young woman. In the center of her canoe was a tiny stove arrangement fed by charcoal upon which she could prepare a delicious meal from food neatly stored and protected along the sides of her canoe.

With the musicians on one side, and the refreshment canoe on the other, we dined and dreamed amid the beauty and fragrance of myriad colored blooms, in the cool shade of ancient trees to the soft strains of stringed instruments and plaintive lullabies.

Back in the waterways, propelled along by the sweep and pole of the boatman, he threaded our course through an intricate and colorful water traffic of craft laden with market produce and singing, laughing musical holiday seekers.

To our right, to our left, passed great masses of roses lilies, carnations growing in brilliant gardens and loaded high in canoes on their way to the great flower market of the city.

Birds of brilliant plumage mingled their

(Continued on page 21)



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Main canals thirty to fifty feet wide



A Thousand Cameras," by Bert Longworth from Warner Bros short "Richard Himber and His Band" These shots were made with two old mirrors, about twelve feet wide used in Gold Diggers of 1936" one of the mirrors having acquired a large bulge from having stood so long The lighting is all from the side which when reflected gives the front lighting First cameraman, Arthur Todd operative camera man George Nogle assistant Frank Evans stills Bert Six director Jean Negulesco assistant director Jack Sullivan

THE KODATRON

High Speed Lighting Unit plays an important role in Commercial, Illustrative, News, Portrait, Medical, Scientific and Technical Fields

To the photographer the new Kodatron Speedlamp opens the way for pictures of superb technical quality in either black and white or Kodachrome at extremely low illumination cost with extremely small lens apertures, and with no chance of subject motion in the negative or color transparency. Completely modern and incorporating an improved circuit new safety and convenience features this unit is attractively styled for use in the finest studio.

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1. Critically sharp pictures of subjects moving at high speed.

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6. Uniform volume of light at each flash with no practical deterioration as the flash tube ages.

Tube Yields More Than 5,000 Flashes

7. Long life of the flash tube (upwards of 5,000 flashes).

8. Subject comfort in pictures which include models and better conditions for commercial subjects such as food displays which deteriorate readily—since the Kodatron lamp is free from the heat produced by conventional high wattage studio lamps.

9. Accuracy of modeling a modeling or focusing lamp being centered in each flash tube so that the angle of lighting is precisely the same for both flash and modeling light. The modeling light also gives a faithful preview of the light balance that will be obtained in the flash photograph.

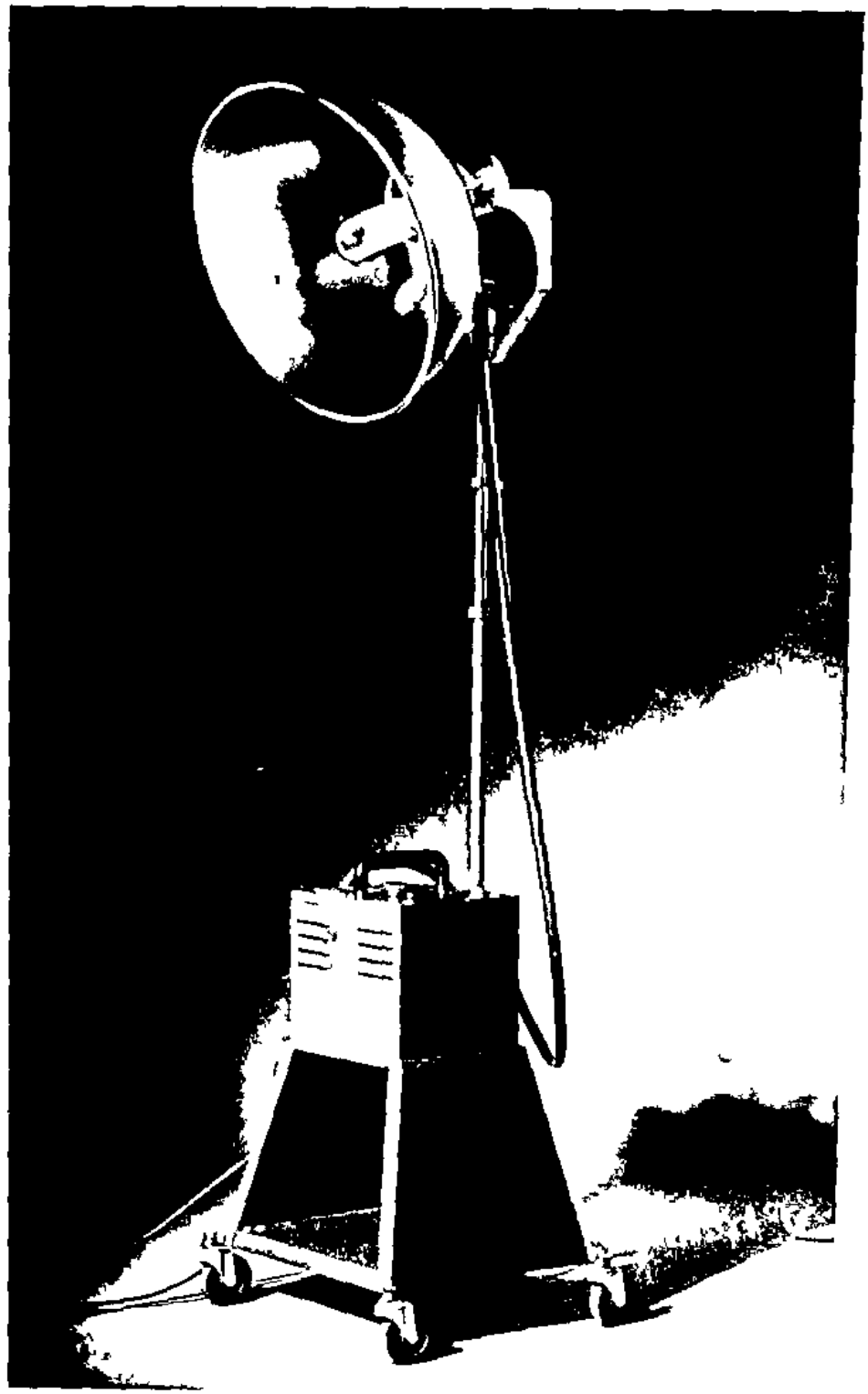
10. No eye discomfort for subjects because of the extreme brevity of the flash. To the eye the Kodatron flash appears much softer and far less intense than other types of photographic flash illumination.

11. Normal pupil size in a subject's eyes owing to the moderate illumination level used in modeling and focusing.

12. A specially designed reflector which yields illumination intermediate between that of a spotlight and a floodlight. Well suited for general lighting the reflector is also directional enough to increase the intensity along the axis to a considerable degree for shots at long range.

13. Unique economy of operation owing to the long life of the flash tube extreme durability of tubes in the power unit and an indefinitely long life for the power unit itself.

14. Low power consumption which effects a substantial two way saving first, in lower electric bills second in studio wiring requirements. The Kodatron Speed





Starting upper left reading right Jack Cole and partner Betty Grable and Homer Pan from Twentieth Century Fox Production "Moon Over Miami," stills by Frank Powolny; next three stills are by courtesy of Eastman Kodak Company; upper right and on with the next two Anna Neagle and Ray Bolger in their dance routine in the RKO Radio filmusical, "Sunny" stills by Alex Kahle; with hats in the air are the Nicholis Brothers,

(See story starting on page 13)















shot by Frank Powolny in Twentieth Century Fox Production Sun Valley Serenade Ann Neagle and Ray Bolger dancing the Sailor's Hornpipe in Sunny ; two lowers page 14 from the same production stills by Alex Kahle; the figure that looks like the scarecrow with Ginger Rogers is really Burgess Meredith in a scene from the fantasy sequence in Tom Dick and Harry " RKO Radio romantic comedy still by John Michle; and last is another scene from "Sunny" of Anna Neagle and Ray Bolger by Alex Kahle

lamp does not require the special wiring necessary for ordinary studio lamps

15 Reasonable portability Reflectors and power units for three lamps can be carried in the rear end of a business coupe or sedan

Solves Long Standing Problems

With the Kodatron Speedlamp ultra speed photography is no longer a laboratory stunt Subject motion, once a problem in many fields of photography, is now an asset. The new lamp also provides complete freedom from certain other limitations of the past, and greatly extends the range of practical photographic subjects treatments or effects For the commercial and illustrative studio, it solves the ancient three-horned dilemma of subject motion field depth and adequate illumination —especially in color photography In the scientific, medical, and technical fields its uses are virtually unlimited. It has definite application in portrait photography, whenever an apparently unposed, characteristic effect is desired or when the subject is a child or unpredictable pet

Where large areas are to be covered the Kodatron lamp has unusual value because of its long throw and great intensity In spite of its apparent mildness, the single flash provides illumination equivalent to that of 50 000 forty watt tungsten lamps. This quantity of light is sufficient to provide a fully timed negative of an average subject 30 feet from the camera at a lens aperture of f 11 when used with films especially recommended for this type of radiation Correspondingly smaller apertures can be used when the subject is nearer the lamp (or lamps)

The Kodatron flash is accomplished by discharging a condenser through a gas-filled tube Ordinary 115-volt 60-cycle current is led into the power unit of the lamp where a specially-constructed transformer steps it up to 2 000 volts. This current is then rectified and used to charge a condenser When the trip circuit is closed (manually by a flash synchronizer or by the photocell unit) the energy stored in the condenser is discharged through the tube producing a flash of high photographic efficiency

In photography with the Kodatron lamp the time of exposure is fixed not by the shutter speed used but by the duration of the flash An effective flash duration of nearly 1 30 000 second combines high volume of light with ability to stop virtually any moving subject, except a rifle bullet In these high speed lamps the time of the flash is determined by the capacity of the main condenser in the power unit By using a small condenser it would be possible to speed up the flash to any desired point -such as 1 1,000 000 of a second or less—but the volume of light would decline correspondingly thus reducing the general utility of the lighting unit For this reason, and on the basis of extensive experiments this flash speed has been selected as ideal for all round usefulness

This flash speed is, of course, many times faster than the highest setting of any camera shutter It is several hundred times as swift as the wink of an eye, and approximately ten times as fast as is necessary to stop an athlete in action If one second were represented as a mile the effective duration of the Kodatron flash would correspond to only a few inches of this distance

An interesting feature is that, owing to persistence of the image on the retina of the eye the flash seems to last about 1/25 to 1/50 second and when a swift moving subject is photographed by means of these lamps it will appear to "freeze for just about that length of time

Current Consumption is Small

With the Kodatron lamp one flash can be made every ten seconds—this being the charging time of the condenser The charging takes place automatically, and the ten second period allows convenient time for changing film and resetting the camera shutter Current consumption is quite small during the charging cycle—about five amperes at the start decreasing in a few seconds to less than one ampere—and this explains the extreme operating economy of the Kodatron lamps Two to three of the lamps can be operated safely on an ordinary house-lighting circuit fused for 15 amperes

Quality of the Kodatron light is excellent for photographic purposes, not only in actinic value but also in color balance Excellent tonal rendering is obtained in black-and white photographs on panchromatic films without the attendant over correction in the red which is characteristic of these materials when used with tungsten illumination For color photography Professional Kodachrome Film yields highly satisfactory results when used with moderate correcting filters

The Kodatron Speedlamp is a compact efficient studio unit It consists of a power unit 8x10x9 inches and an 18-inch spun aluminum reflector on a telescoping steel stand which can be extended to a height of eight feet—both mounted on a small tray top steel base to which rubber tired swiveled casters are attached Finish is gray with some metal parts finished in polished chrome

Portable for Assignments

For assignments away from the studio, newspaper office or other base of operations the reflector and power unit alone may be used Each power unit has a convenient carrying handle on top Reflectors can be mounted on tripods without need of alterations or can be held by assistants The weight of the power unit and reflector is about 40 pounds that of the complete lamp with base 59 pounds. Ordinary residence hotel or convention hall wiring is adequate for these lamps as noted above

Controls are concentrated in a small panel on top of the power unit These controls include the flash trip, off and on" switch for the main power line, and a red pilot light which shows when the unit is in operation A single cable from the power unit to the reflector carries wiring for both the flash lamp and modeling light The lamp cable, and the 115-volt, 60-cycle electric supply cord plug into the sides of the power unit, and must be removed before the hinged top can be lifted. This arrangement—plus an automatic cut out switch which functions as the power unit lid is opened—makes it impossible to touch a "live connection

The flash lamp itself has a tubular frosted glass shell, fitting over a spiral glass tube which contains a mixture of rare gases This is the flash element, the gas heating to incandescence when the condenser charge is released through it. Centered in the coil of the gas tube is the modeling light a projection type bulb of moderate wattage and long life

Synchronization of the Speedlamp to the camera shutter action may be accomplished by the simplest type of contact adjustment (A special synchronizing unit for use with shutters having a cable release socket is available) After attaching the synchronizer, the shutter is simply held up to the lamp and the release operated If the flash reveals the complete circular aperture of the lens, synchronization is perfect if the shutter blades are seen partly opened, a slight further adjustment is necessary This ease of checking makes it possible to test the synchronization at any time, without the bother or expense of test exposures.

As many lamps as desired may be flashed in synchronism to cover large areas or to obtain better modeling Two methods are practical One is to use wiring from lamp to lamp the other to use small accessory photoelectric trip units which clip directly to the lamp standard

Photocell Control is Convenient

In photo-electric synchronization a photocell unit is used on each lamp except one which is connected by wire to the camera shutter Inter lamp wiring is eliminated since the shutter actuated flash of the first lamp fires all the others, through the action of the photocell units This method of synchronizing is particularly convenient when the set up is extensive or when lamp to lamp wiring would be in the way

Outdoors or in a dark walled studio, the photocell units are effective at distances up to more than fifty feet, but in these locations each photocell must be placed so that it can "see" the first lamp In a studio with light walls the photocell units will operate by reflected light almost regardless of their placing They cannot, however be accidentally actuated by daylight or the general studio illumination

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Eastman Kodak Company, Rochester, N. Y.



USING THE EXPOSURE METER

By GLEN C. ANDERSON,
General Electric Company

(Concluded from June issue)

Exposure can be determined by the measurement of light falling on the subject or light reflected from the subject. Either can be measured to obtain correct exposure. Obviously the amount of light falling on the subject determines the amount of light that will be reflected. Usually it is more convenient to measure reflected light, but the meter has to be restricted to see the same scene as the camera. In the G-E meter this requirement has been met mechanically by means of a directional hood or baffle which limits the field of view to that of the average camera. It has a horizontal angle of about 50 degrees and a vertical angle of about 30 degrees. The vertical angle is made purposely narrow to exclude bright sky and foreground which tends to cause error in exposure.

As a rule exterior scenes are made by measuring the scene in the same manner that the picture is taken with the meter pointed at the scene. In interior work where extremely high contrast exists, a more correct reading can be obtained by measuring the light falling on the subject, rather than the reflected light. These incident light readings are taken with the hood removed and the meter pointed at the camera from the subject. On a scene well illuminated by artificial light with a background of no particular interest, only the actual light on the subject is measured. If a reflection measurement were used it would be necessary to average several readings to obtain the best possible exposure for the over-all scene. So in most cases best results can be obtained by measuring the light falling on the subject of interest.

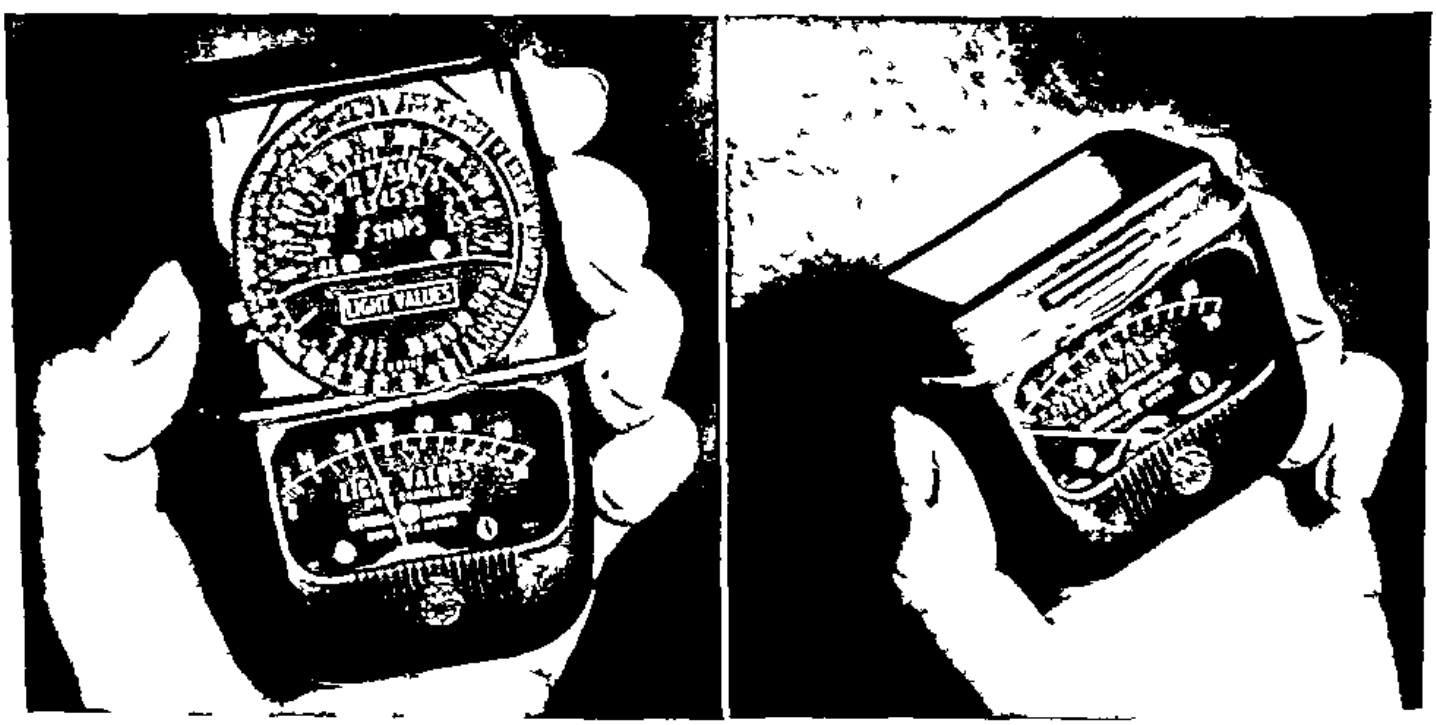
The calculator on the G-E meter is simply a slide rule which enables you to convert light reading and film value into the proper combination of F stops and shutter speed. The proper combination of F stops and shutter speeds are lined up on the calculator and after it is adjusted for a reading any combination then visible will produce the correct exposure. Small lens openings line up with longer exposure time and large lens openings are opposite shorter exposure time but in each case there is a definite quantity of light that must fall on the film.

Other calculators can be supplied for the movie and sports photographers. In the case of the movie camera there is a certain fixed shutter speed such as 16 frames per second. For the sports photographer who must use a fast shutter such as one one hundredth or one one-thousandth of a second to stop the action there is also a present calculator with shutter speed set with the film value. When the light is measured the light value indicates the proper combination of F stop to use with no further adjustment. Hoods with these different types of calculators are readily interchangeable on the G-E meter.

Now that we know the characteristics of the sensitive emulsions that we are working with the proper approach in determining the values of film speeds, and the characteristics and design of the instrument we are working with we can intelligently use these instruments to their best advantage. Working outdoors with flat side or back lighting the meter need only be pointed at the subject to obtain a usable reading. You will notice that sidelight will usually call for about twice the exposure that a sunlit scene requires because only half as much light is being reflected toward the camera.

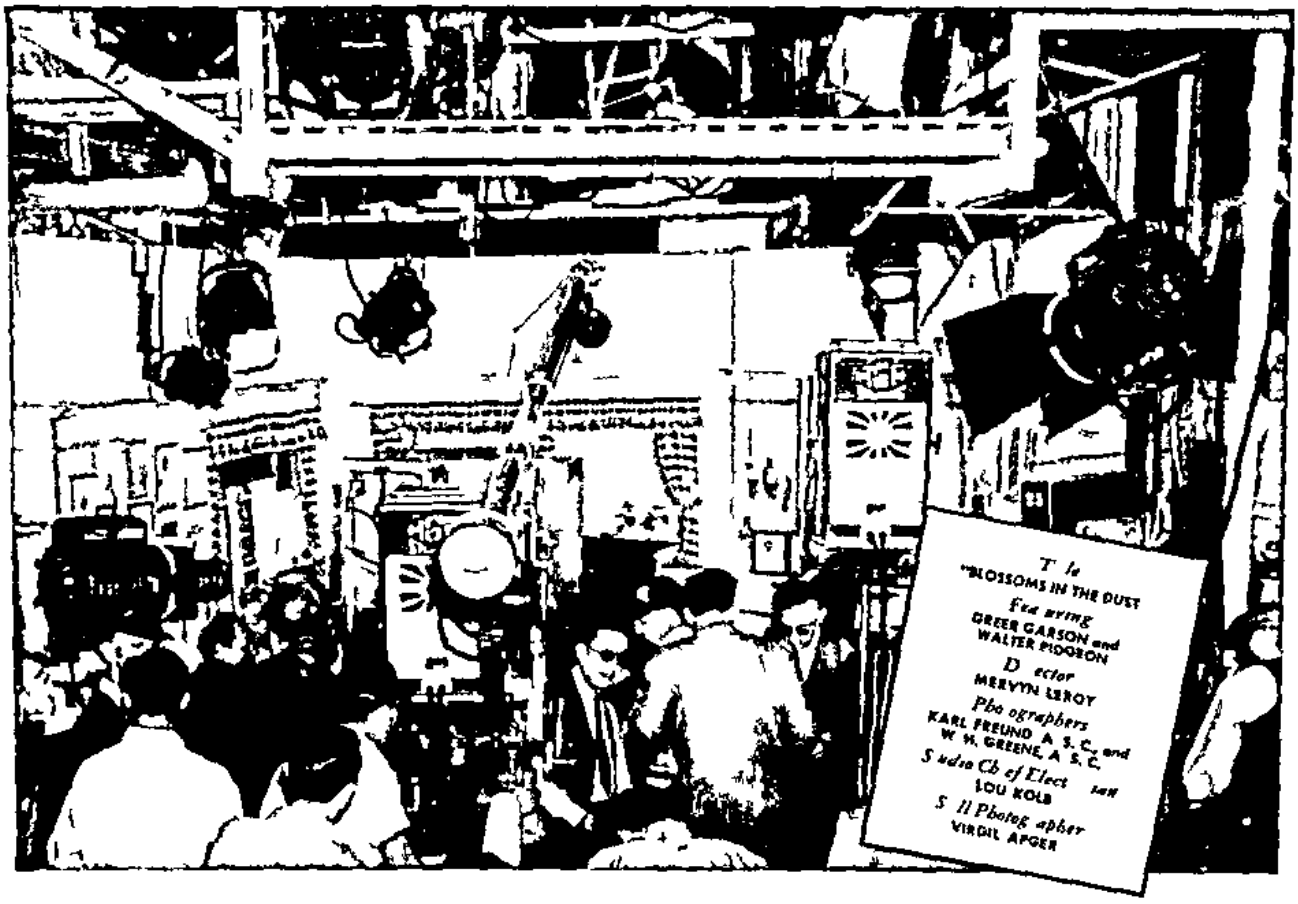
To photograph a subject without regard for background take a meter reading right on the subject. If your subject is out of reach hold your hand in the same relative position and take a meter reading on the back of your hand. Extensive tests indicate that the color of the average person's hand is sufficiently neutral to be used satisfactorily for most subjects. If you are in bright sunlight and your subject is in the shade the light intensity of your subject can be duplicated easily by throwing a shadow across your hand for the

(Continued on page 26)



37*831 G-E EXPOSURE METER TYPE DW-48, WITH COVER CLOSED, SET FOR READING IN F STOPS AND LIGHT VALUES.

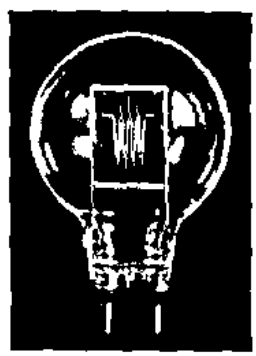
37*812 G-E EXPOSURE METER TYPE DW-48, WITH HOOD, READY FOR USE IN F STOPS AND LIGHT VALUES. THE CENTRAL SPOT METHOD BEING USED.



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These are only a few of the many advantages which G E MAZDA lamps offer you Are you familiar with all their possibilities for better photography?

GENERAL ELECTRIC

MAZDA LAMPS

TELEVISION

By Duster Evans

In the eyes of the Television world the month of July can rightfully boast of two famous days—July 1 and now, July 1!

Both days too have much in common. Just as July 1 marked the real beginning of a great and prosperous nation so should July 1 of this year, long be remembered as marking the real beginning of a great and prosperous new industry. On this day" future records will read "Commercial Television made its debut as authorized by the Federal Communicaitons Commission"

The exciting fact today is that Television, like its bigger brother Radio can now sell programs to sponsors. And those who should know say that this will really set the Television ball to rolling. It's pretty hard not to agree looking back at Radio's spectacular history and the important part played in its development by the commercially sponsored program.

So an amazing new industry promises to get under way right in the midst of today's great industrial activity. And yet a few generations ago the idea of being able to send a picture invisibly through the air would have been regarded as one of the wildest and most fantastic dreams of the Jules Verne variety.

But science today has no respect for the "fantastic dreams" of yesterday. Not only has it succeeded in sending pictures through the air by means of Television but these pictures move! They show life action! But this achievement was not enough. Successful experiments have been carried out transmitting Television pictures in natural color. Television's silvery screen is being transformed into all of the colorful hues of the rainbow. Before long Color Television may be available to the public.

Yes one can understand why Television has been called twentieth century magic at its best.

The vast majority of American people however have yet to witness their first Television performance. Certainly they have a treat in store. In fact let's sit in on a program!

The lights in the room are lowered. A test pattern has already appeared on the screen of our receiver enabling us to adjust the controls for proper focusing and brilliancy.

Strains of martial music suddenly crash from the receiver and on the screen we see the title of a news reel. Quickly we lose ourselves in interest as history in the making parades before us. It is as though our neighborhood theatre has suddenly been transported to us here within the comforts of our home. As the last scene fades the announcer appears to tell us that a studio play will follow.

We are agreeably surprised at the many clever sight and sound effects used and soon become engrossed in a well acted mystery plot. Lighter entertainment then flashes before us in the form of an animated cartoon.

All of the pictures have been clear and flickerless and the accompanying sound has amazed us with its startling realistic tone. For Television is now profiting from Radio's great new development known as Frequency Modulation. The Television set owner not only enjoys sharp brilliant pictures but he is also scheduled to receive the very finest in the way of sound reproduction.

Probably the biggest thrill of Television is that it enables us to see things as they are happening. For instance owners of Television receivers served by the NBC station in New York City have participated in a wide variety of interesting events. Their receivers have brought them numerous programs and scenes from the former New York World's Fair. They have also seen an eclipse of the sun, the impressive ceremonies of the Court of Peace on Pan American Day, a parade of the new mechanized U. S. Army units, the annual Fifth Avenue display of fashions on Easter Sunday, a view of New York City from a skyliner, the arrival and take-off of the great trans Atlantic Clipper, fire fighters in action etc.

Sport enthusiasts too have had plenty of thrills via Television. They have witnessed a track meet where nine world records were broken. They have attended numerous colleges and professional baseball games. Football fans have also had more than their share of excitement. Tennis, boxing, the six-day bicycle races, fencing, basketball and ice hockey have all contributed to many interesting Television programs.

The movie-lover also has been thrilled at the impressive array of educational travel and feature films that have been televised. Then there have been grand opera, variety, vaudeville shows, drama, regularly scheduled news programs, spelling bees, the building and flying of model aeroplanes, cooking demonstrations, travel lectures and movies for arm chair adventurers and other interesting events.

Certainly with all of this having occurred within one brief year of "Experimental Television"—what may we look forward to, now that Television has become commercialized?

It seems certain the American family is going to find Television will provide the source for a new high in home entertainment and interest. It seems certain, too, that Television before very long will start exerting a real effect in such fields as merchandising, education, aviation, military defense and law enforcement.

But most important to ambitious young men today, the growth of Television promises to open up a bright new field of opportunity and in work that is interesting to the point of fascination. Any young man seeking to make the most of his years ahead may well owe it to himself to fully investigate the possibilities ahead of this amazing new industry. Likewise he may do well to consider how he can prepare to be ready for the start he needs.

Any of our readers who are interested in entering the Television, Radio and Sound Motion Picture field may secure additional details by addressing the writer of this article, care of INTERNATIONAL PHOTOGRAPHER.

Posthumous Honor to Herman A. DeVry

The innumerable friends of the late Herman A. DeVry, pioneer motion picture projector inventor, engineer and founder of the DeVry Corporation, will be delighted to learn that on June 2, 1941 a posthumous honor in the form of a Doctor of Science Degree was conferred upon him by Lincoln Memorial University, Harrogate, Tennessee.

PARADISE SOUTH

(Continued from page 11)

color with the blooms in this paradise of abundance. Then the boatman pushed his craft silently, smoothly through an arch of high poplars with their branches grasping together to form the vaulted arc of a cathedral arch with its myriad glints of dancing sunspots breaking through fluttering leaves like the blinking of tiny frosted electric lights. On we floated to an altar of Nature's grandeur while the slight slow wind played a benediction on the low flute reeds as we slowly approached an "island" covered with huge red roses.

Truly this is Paradise South where the bitter struggle of life and scorching memories can be laid aside while the sweetness of romance beckons and holds captive.

CAMERAMEN ON WILD GOOSE CHASE

It may be a wild goose chase and it may not

At any rate 20th Century Fox sent a special camera crew of five aloft in a chartered plane to photograph several flocks of wild geese flying in their typical wedge formation The shots are needed in the picturization of Stewart Edward White's novel "Wild Geese Calling which has just gone before the cameras at the studio with Henry Fonda and Joan Bennett in the major roles

The plane is piloted by Marion McKeen a veteran speed stunt and commercial pilot He will fly the ship first to Oregon and if the necessary footage cannot be obtained there the party will be ferried to Utah for a further attempt

The major problem it was pointed out by both McKenn and Leon Shamroy who heads the camera crew will be to approach the geese at sufficiently close range to get some good shots and yet not frighten the birds so that they break formation and scatter

"But any way you look at it" said Shamroy "it will be a wild goose chase"

RKO Completes First Block-of Five

With its first block of five for 1941-42 ready for preview screenings for delegates now attending RKO Radio's Tenth Annual Sales Convention in New York City, the studio is working well in advance of schedule in preparation for market showings and sales under the terms of the new consent decree

Included in the quintet are some of the outstanding attractions of the new Hollywood crop Among them is "The Devil and Daniel Webster "Father Takes a Wife" Before the Fact," and Parachute Battalion" depicting the newest and most spectacular arm of Uncle Sam's defense forces the parachute infantry Public interest in this picture has been tremendously stimulated by the sensational accident at San Diego which recently grabbed off the headlines when a chute's shroud lines became entangled in the fuselage of the plane and a breath taking rescue of the dangling parachutist was effected An almost identical episode was filmed as one of the thrilling sequences in "Parachute Battalion which oddly enough was completed long before the San Diego episode occurred

Director Mayo Offers Services to Uncle Sam

Although he is at the top of his Hollywood career Director Archie Mayo expects to abandon the film town for the duration as soon as he is finished with his current 20th Century Fox assignment Charley's Aunt in which he is directing Jack Benny and Kay Francis

Mayo has already offered his services to the U S Army to head entertainment units a post which he is fully equipped to handle

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PATENTS

By ROBERT W FULWIDER
Patent Attorney, Los Angeles

No 2,238 497—Sound Camera *William E Merriman* assignor to Eastman Kodak Company Appln Oct 14 1939 15 claims

A sound camera in which the sound drum shaft is first connected to the drive means to bring it up to speed and then disconnecting the shaft and drive means and connecting the drive and film feeding means

No 2 238 547 — Photographic Developer *William H Wood* assignor to Harris Seybold Potter Company Appln June 6 1939 3 claims

A process of developing photographic images and hardening the gelatinous surfaces with a silver halide developer in the presence of a potassium sale embodying potassium pyrophosphate

No 2 238 629 — Method for Stereoscopic Scanning of Pictures *Jacob L Dennison* New York Appln April 21 1937 2 claims

A method of producing stereoscopic projection of motion pictures by the use of a single film the film having side by-side pictures which are alternately projected

No 2 238 733 35—Recording and Reproducing Sound *Erik Waldemar Hullegard* Stockholm, Sweden assignor to Radio Corporation of America Appln Mar 17 1938 In Sweden March 23 193 4 claims

A sound record of the photophonographic type including a film having images of opposite half cycles of sound waves thereon in different colors and an opaque background surrounding said wave images

No 2 238,947—Sound Recording System *Oscar A Ross* New York N Y Appln July 15 1937 8 claims

A method of sound recording in which a record is made of the frequency and amplitude of the sound waves while a second record is made of their amplitude only and re-recording the sound while varying its amplitude by means of the second record

No 2,238 996 — Sound Track Cleaner for Motion Picture Film *Roy J Fisher* assignor to Harold J Nagle Roy Fisher and Nelson H Copp all of Rochester N Y as joint trustees Appln Dec 1 1936 7 claims

A device for cleaning a film while the latter is in motion and comprising a pair of rotatably mounted cleaning members bearing against the film

No 2,239,330 — Slating Device. *Daniel Bryan Clark and Grover Laube* assignors to Twentieth Century Fox Film Corporation Appln Jan 16 1940 8 claims

A slating device for motion picture cameras and having a housing adapted to be inserted between the camera and its magazine with a compartment in the housing to receive indicia and means to project a moving image of the indicia on the moving film

No 2 239,532 — Film Tempo Punch *Royal C McClay* assignor to Warner Brothers Pictures Inc Appln Oct 21 1938 15 claims

A device for intermittently feeding film from one reel to another and punching the film while it is at rest.

No 2,239 693—Photographic Element *Burt H Carroll* assignor to Eastman Kodak Co Appln Feb 20 1940 In Great Britain March 9 1939 7 claims

A film having a base an emulsion sensitized to green light with a sensitizing dye and a blue sensitive emulsion containing a dye which adsorbs to the silver halide in the layer and imparts substantially no extension to the spectral sensitivity of the layer

No 2 239 699—Prevention of Diffusion of Sensitizing Dyes *Burt H Carroll* assignor to Eastman Kodak Company Appln Feb 20 1940 In Great Britain March 9 1939 10 claims

A photographic silver halide emulsion sensitized with a quaternary ammonium salt sensitizer and containing a perhalogenate salt other than a quarternary ammonium perhalogenate

No 2,240 131—Arrangement for Securing Stereoscopic Cinematographic Projections *Suzanne Carre nee Berment* France assignor to Societe a Responsabilite limitee dite La Cronos stereoscopic Paris France Appln March 18 1938 In France March 23 1937 1 claim

A device for obtaining stereoscopic pictures by alternately projecting right and left images through a screen and simultaneously moving a grid back and forth between the screen and the spectators

No 2 240 398—Cinematography *Lionel Hubert Hutt* Rangoon Burma British India Appln April 21 1939 In Great Britain June 28, 1939 16 claims

A movable screen in a motion picture camera the screen permitting a small sharp image to be formed, with increasing diffusion away from the sharp image and movable by the operator of the camera

No 2 240 703 — Projector for Stereoscopic Pictures—*Fritz Kober* assignor to Zeiss Ikon Aktiengesellschaft Germany Application February 16, 1939 In Germany Feb 22 1938 4 claims

A projector for stereoscopic pictures having a polarizing filter over each half of objective lens and a pair of prisms to deflect the differently polarized images so they are superposed on the screen

No 2 240 841—Picture Projection *Jeremiah F Goggin* Moline Ill., and *Ray E Hall* Davenport, Iowa Application May 21 1938. 3 claims

A method of projecting pictures which uses phosphorescent screen which glows with the image of the preceding picture while the next one is being moved into projecting position

No 2 240 728—Stereo Camera *Otto Fierling* Dresden Blasewitz and *Fritz Kober* Dresden Germany assignors to Zeiss Ikon Aktiengesellschaft Dresden Germany Application Nov 17 1938 Serial No 241 065 In Germany Nov 19 1937 3 claims

A stereoscopic projector using polarizing filters and having prisms which superpose the images on the screen without the formation of secondary images

No 2 241 104—Process and Apparatus for the Treatment of Photographic Coatings *Lodewijk Pieter Frans van der Grinten*, Venlo Netherlands assignor to Naamlooze Vennoot-schap Chemische Fabriek L van der Grinten Venlo Netherlands Application April 22, 1939 in the Netherlands Jan 19 1939 25 claims

A method of developing or fixing films by the "semi wet" process in which the film is subjected to a number of closely spaced fine sprays of treating liquid

No 2 241 124—Printing Method for Color Photography Otto C. Gilmore assignor to Cosmocolor Corporation Jersey City N J Original application May 25, 1939 Divided and this application Dec 7 1939 5 claims

A method of optically printing a film having two smaller complete images of different color values in a single frame the method including printing one set of images on one side of duplitized film and then reversing the images of the other set and printing on the other side of the film

No 2 241,239—Ultraviolet Light Filter *Burt H Carroll* and *Cyril J Staud* assignors to Eastman Kodak Company Rochester N Y Application Jan 19 1940 In Great Britain Jan 23 1939 10 claims

A film affected by ultraviolet light which has a colloidal material which acts as a filter on the film

No 2 241 413 — Photographic Printing Process and Image for Use Therein A method of printing color photographs in which there are at least two color value images one of the images being a composite double-colored image

No 2,241 519—Photographic Material *Louis Pollak* Altrincham Cheshire Eng

land Application May 20 1937 In Great Britain May 23 1936 7 claims

A film having two emulsions sensitive to different parts of the spectrum one of the emulsions being hardened so as to be substantially insoluble in warm water and the other emulsion being soluble in warm water and forming only a weak image after normal exposure

No 2 241 689—Cinematographic Apparatus *Lloyed E Whittaker* assignor to Technicolor Motion Picture Corporation Los Angeles Calif Application May 31 1939 1 claim

A drive for a film take up reel in which the driving force applied to the reel is progressively increased as the diameter of the roll of film increases

No 2 241 929—Production of Motion Pictures of Three Dimensional Animated Objects *Albert C Kendig Jr* Los Angeles Calif., assignor of one-third to Fred W Clampett Los Angeles Calif and one third to Robert E Clampett Manhattan Beach Calif Application March 23 1939 13 claims

A method of producing motion pictures in which a series of images of an animated object is projected an object is posed so that its shadow registers with the images, and the object is photographed

No 2 242 567—Manufacture of Translucent Screens *Bernard M Bodde* Hollywood Calif Original application November 22 1935 Divided and this application June 6 1938 7 claims

The method of making a sheet of cellulose ester material which comprises spraying multiple coats of a solution of cellulose ester material upon the under surface of a substantially horizontal matrix allowing the sheet thus formed to dry and stripping said sheet from said matrix

No 2 242 571—Producing Apparatus for Sound Picture Films *John Eggert* and *Hans Friedrich* Nissen Germany assignors to I G Farbenindustrie Akt engesellschaft Frankfort on the-Main Germany Application May 19 1937 In Germany May 23 1936 3 claims

A reproducer for sound films having optional paths, one for a film reproduced by the copying method and the other for a film developed by the reversal process

No 2 242 666—Camera *Thomas J Walsh* West Hempstead N Y assignor to Patrick Nardell Bronx County N Y and Joseph Ladaga and William L Morris both of New York N Y jointly Application March 29 1939 10 claims

A camera having a stationary long shot lens and a stationary close up lens with means for rendering either of them effective and the other ineffective and interconnected finder lenses which correspond to the fields of the objectives and are rendered effective and ineffective with them

No 2,242,747—Tripack for Producing Photographic Pictures Walter Frankenburger Cuba Max Herbst, and Hermann Schulz Germany assignor to General Aniline & Film Corporation New York N Y Application Jan 11 1939 In Germany Jan 19 1938 7 claims

A tripack having a top layer sensitive to red a second layer sensitive to green and a bottom layer sensitive to blue with a filter between the second and bottom layers which absorbs at least 60% of the light having wave length 5000° A and a still greater percentage of light of longer wave length

No 2 243 017—Control Method and Mechanism for Photographic Printers *Warren Dunlam Foster* and *Earle L Parmelee* deceased assignors to Kinatome Patents Corporation Ridgewood N J Application Sept 24 1934 28 claims

A continuous printer in which both the light emitted by a printing light and the capacity of source to emit light may be changed to modify the effectiveness of the light

No 2 243 048—Control Method and Mechanism for Photographic Printers *Warren Dunham Foster* and *Earle L Parmelee* deceased assignors to Kinatome Patents Corporation Ridgewood N J Original application Sept 24 1934 Divided and this application Sept. 24 1934 19 claims

A continuous printer in which the light emitted from a source may be changed and the speed of film may be changed to produce changes in the printed density

No 2 243 212—Support for Motion Picture Projection Machines or the like *Albert Kindelmann* and *Claude A Soehl* assignors to International Projector Corporation New York Application April 29 1937 13 claims

A pedestal which has an arm supported for vertical tilting movement about a horizontal axis and a screw of limited length which may be inserted in a plurality of positions to provide adjustment of the tilting in different stages

Cartoon photography

(Continued from page 10)

our cartoons we made from the Technicolor positive a three successive frame negative strip by rephotographing each frame through the three color separation filters changed by hand from frame to frame A rather laborious and tedious procedure but nevertheless successful

Black and white positives have likewise been copied in Technicolor by the same process color being added to the black and white picture by tinting the light with color filters

Many cartoon scenes require special effects in the way of double or multiple exposures which presents a fascinating problem to the cameramen Inasmuch as each frame is accounted for in the timing of a cartoon and the camera is equipped with a feeder counter and kept in gear at all times and can be operated forward or in reverse the cameraman can wind back to any particular frame and make what double exposure the scene requires In many cases for special effects such as double exposures light effects multiple exposures, or montages the film has been through the camera as many as ten or twelve times each time receiving whatever exposure is required before the film is finally taken out of the camera for development

In this respect animated cartoon photography is unique in that all these effects as well as dissolves wipe offs fades split screens etc are made in the camera at the time of photography and not added later by optical printing or in the laboratory

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Exposure Meter

(Continued from page 18)

reading Pictures taken without a reading of this type expose the scene just about as the eye sees it and many times the result is under-exposure of the subject Hand measurement is also a useful device in taking sport pictures For example if you want the detail of a skier coming over an extremely bright foreground take a reading off the back of your hand held in the light the subject will appear in The measurement can be taken camera adjusted and proper exposure can be obtained when the subject is in position This is a good method to remember for all types of candid shots too

For indoor work there are two methods of measuring light The reflected light method can be used with brilliantly lighted photoflood scenes However, the reading should be taken close to the subject to overcome the tendency to over expose caused by the dark background

The incident light method is very accurate and convenient in taking indoor pictures It indicates an average over all exposure and the best results are obtained Under certain specific conditions the incident light method will give the better color film exposure Since the photoelectric cell is more sensitive to the blue colors than the red in the spectral response curve, a more accurate exposure can be obtained when the color of the subject does not influence the meter In the case of a flower, for example a reflected light measurement of the scene would cause an over exposure of the flower portion because the exposure meter attempts to balance the exposure for the dark green leaves that surround the scene plus the flower In most cases the flower is the main part of interest and the leaves of secondary interest Therefore an exposure obtained from a reflected light reading will cause the flower to photograph lighter than it normally should and will cause the dark green leaves to photograph a lighter green than they are Therefore we can obtain a truer photograph by measuring incident light

With the directional hood removed the G E meter can be used very effectively to balance lighting and measure the difference between the highlights and the shadow reading of the subject and scene This facilitates special effects obtainable by controlling the illumination For color film work it is easy to keep the ratio between the high and low light portions as 4 to 1, or at the 2 to 1 ratio for best results The same thing can be done for black and white work For example, a high key photograph can be lighted and controlled by measuring the light to keep a ratio of 2 to 1 An average scene will be 4 or 5 to 1 ratio Special effects low key and high contrast pictures can be made by making the illumination as high as 10 to 1 or 12 to 1

Some outdoor scenes can have a ratio of 128 to 1 but the average photographic paper can only print a range of 30 to 1, so that even though we have a great range on our films it is impossible to reproduce this full brightness range in the final print The sensitive curve of the paper of course can be made to somewhat approach that of the photographic film by means of dodging when an enlargement is made This actually reshapes the H and D curve of the paper by stretching and bending it around until it more nearly fits the H and D curve of the film On the average scene this special work is not necessary but in some conditions a better print will result when the two H and D curves are more nearly matched by dodging when the enlargement is made

This is by no means the end of the exposure meter's usefulness With hood removed it can be used to measure light transmitted through a negative for correct exposure in printing or enlarging Numerous variables that are encountered in printing prevent a calculator as simple as is used with films being made for paper Photographic paper is inclined to vary more than photographic film and secondly, paper developer formulas are more varied than film formulas Last but not least the personal element must enter in as to the type of print the operator desires This is something that cannot be measured and to compensate for this unknown it is necessary to take a reading on the first negative and make a test print This gives us complete allowance for all of these variables For example if the first negative reads 10 and the test time is 20 seconds and the next negative reads 5 on the meter the required time would be 40 seconds i e 10 times 20 over 5 equals 40 It is very easy to go through an entire row or group of negatives and determine quickly the correct exposure time Use the formula—first meter reading times test time over the meter reading of unknown equals the new printing time By using this accurately and consistently you can produce prints of the same quality as determined by the first test print This same method may be used when a contact print is made To determine exposure time when contact printing place the meter cell face down on the negative in the contact printer Make two or three measurements to determine average density To follow this procedure when making



Tones in a scene such as this may cover eight F stops, as shown

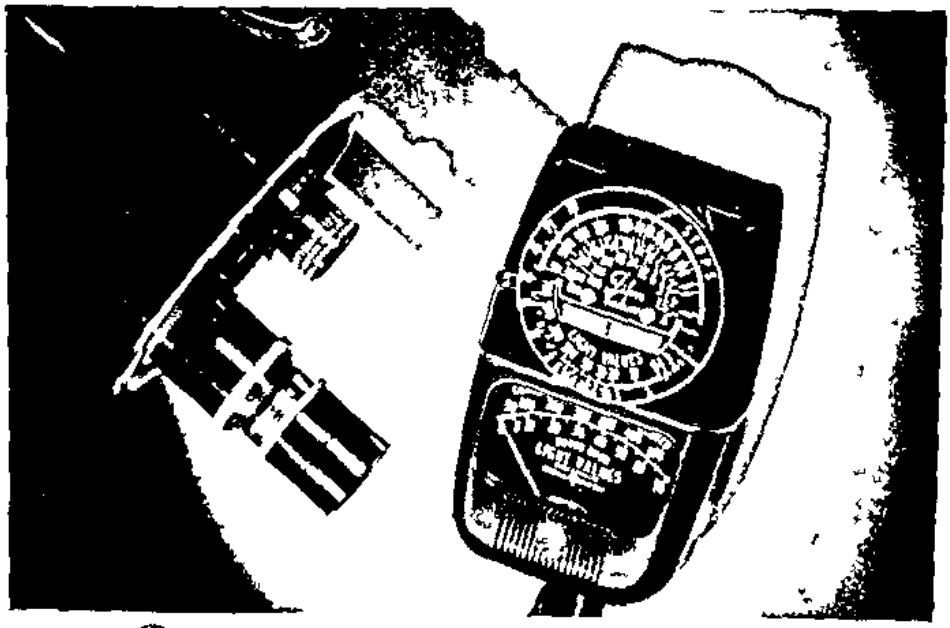
enlargements the meter should be held close to the lens of the enlarger to get an over all average measurement of the negatives A meter held on the baseboard of *the enlarger will not give the correct* over all average

To use the meter to determine correct paper grade for a negative fit the photo electric cell with a small mask Take a light source such as a gooseneck reading lamp, and hold it above the light meter The negative can then be placed on the light meter and the darkest and the lightest part of the negative measured Roughly, if the negative has a ratio of 10 to 1 a contrasting or hard type of paper should be used If the ratio is about 20 to 1 a medium grade paper will give the best results A contrast range of 30 to 1 will require a soft grade of paper Since there are certain variations in different makes of paper this ratio may not hold exactly However, a complete range of paper speeds are shown in the Photo Data Book which comes with each G E meter so that each make of paper can be measured and fitted to the negatives

For color printing the meter can be used as a simple densitometer A smaller hole should be made for a photoelectric cell mask and a brighter light source used to measure the grey scale In this way all three negatives may be quickly compared To determine the exact density of a negative read the meter without a negative over the cell Divide the reading by the number obtained when the negative is placed over the cell This gives the opacity Density is the logarithm of opacity

Darkroom application of the exposure meter does not stop here Should you wish to make negatives of Kodachrome film the exposure meter is held up against the Kodachrome, and the scene brightness is measured by the meter The calculator can then be set the same as for outdoor use to determine the proper exposure For Kodachrome use No 213 enlarging lamps or #1 photofloods to obtain correct color temperature This system is of sufficient accuracy so that you can use Kodachrome film to duplicate a Kodachrome transparency The meter should be held against the transparency with Type A Kodachrome placed in any suitable device for holding the film The original transparency is then projected to make the duplicate using the calculated exposure The result will be the same quality as the original Occasionally by slightly modifying the exposure duplicates can be improved over the original This method can be used to modify the composition on enlargements and will give the same effect as a telephoto lens

These are some of the ways your exposure meter can help you get better pictures The more you use it, the more indispensable it will become to you And as a constant companion in all phases of your photographic work it will help you make good results a habit



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They Say···

By RELLA

● Off to Fort Knox Kentucky for purposes of filming army tank maneuvers in color are Bert Glennon first cameraman Ellsworth Fredericks and Wesley Anderson second cameraman Nelson Cordes and Duke Callahan technicians Eddie Wade and Rod Tolmie assistants and Fred Morgan still cameraman

● The boys in the Newcomb department at MGM are now devoting all their time to matte shots on the guitar

● Bill Eglington RKO camera department executive used to shoot still was a first cameraman and at times directed Thus we can understand Bill's expert judgment in acting as critic in his berth

● Francis J Burgess Paramount assistant cameraman now in the United States Army located at Sixteenth Air Base Stockton Field Stockton Calif

● James V King Recording Secretary of Local 659 was a banker in his youth

● John Burton of Schlesinger conceives and designs many of the main titles we see in pictures

● Off to Florida again for background shots for the new Tarzan picture are Lloyd Knechtel first cameraman A Linslay Lane and Herold Baldwin second cameramen

● Off to Arizona on Wanger's new production are Charles Lang first cameraman Curley Linden second cameraman George Belisario Paul Cable Charles Russell assistants and Eddie Henderson still cameraman

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● Irving Ries of the Ries Department is a master pilot with many wins to his credit in boat racing in Southern California We look to see an engagement between him and some of the boys of Vern Walker's department, who are also skillful in the same sport

● Cliff Stine now shooting first camera at RKO Studios

● Joe MacDonald shooting first at 20th Century Fox

● Bill Draper in his spare time is supervising a machine shop on defense work

● Lee Garmes who photographed "Illusion for Korda also is associate producer on the same production

● Philip W O'Neil is now a First Lieutenant in the Corps Area Service Command Signal Corps Unit 1900 at the Presidio San Francisco

● Tod La Clede soon will have to keep his constant companion a beautiful chow off the best chairs at home He will be married to Clara Nibert in the not distant future

● Robert Rhea is under new management, having recently married Phyllis Cottrell

● It's a close race for first place as best dressed assistants with Mike Doyle Louis DeAngelis and Freddie Anderson as contestants.

● Norman Alley and Paul Ivano palling around in Buenos Aires talking over how things are going in good old Hollywood

● Paul G Vogel, MGM cameraman photographed and directed a Pete Smith Short dealing with army life to be released shortly By coincidence Vogel was in the Photographic Corps during World War No 1

● Off to the Georgia swamps are Lucien Ballard and Joe McDonald first cameramen Twentieth Century Fox with assistants Lee Crawford and Jack Epstein

IN THE MAIL

"U S Naval Air Station
Pensacola Florida

Dear Herb —I know I'm a little slow in getting around to my correspondence but here's a line to let you know that I'm still here and flying about a half day and six days a week The rest of the time has been spent in ground school with nights and Sundays for studying In fact the schedule is so efficient for taking up all our time that some of the boys are thinking of making a break for it over the south wall The local Chamber of Commerce calls it the "Annapolis of the Air" and the Cadets call it the "Alcatraz of the Air

"Anyhow it's all in fun and for our own good that we are getting these tough courses in navigation aerodynamics, etc In six or seven months they have to make pilots naval officers and radio operators out of us, which after all is a pretty big order

"The flying has been swell About three-fourths of the time is solo work and for the past couple of weeks I've been working on acrobatics and what I mean everything in the book

"In spite of all the work we seem to have a pretty swell time of it especially when we get into our white uniforms and step out We have a complete set of officers uniforms and a lot of their privileges which makes up for the long hours

"All of the old buildings have been torn down, with the result that we have practically a new station Blocks of "colossal" new buildings have been put up everywhere There's a fleet of sailboats for us to use and a big riding stable so as soon as I finish school in another month I'm going to get in there and pitch

"Bill Cline, Will Cline and Freddie Detmers stopped in to see me on their way back from "The Yearling" location It surely made me homesick when they pulled out on the train for Hollywood It's good to know that things have been going well and pictures are still being made

"I'll write more Herb when I can get a little time ahead Please convey my best wishes to the boys I'll try to get an interesting article for the magazine in the near future

"Shall hope to see you in about four months if I'm lucky

Sincerely yours,
BOB HAGER"

Irwin Shaw at Warner Bros.

Irwin Shaw noted playwright, has arrived at Warner Bros. to turn his original story "The Hard Way" into a screen play for Ida Lupino Shaw's most recent Broadway success was "The Gentle People, which was filmed by Warners as "Out of the Fog" with Ida Lupino John Garfield Thomas Mitchell and John Qualen

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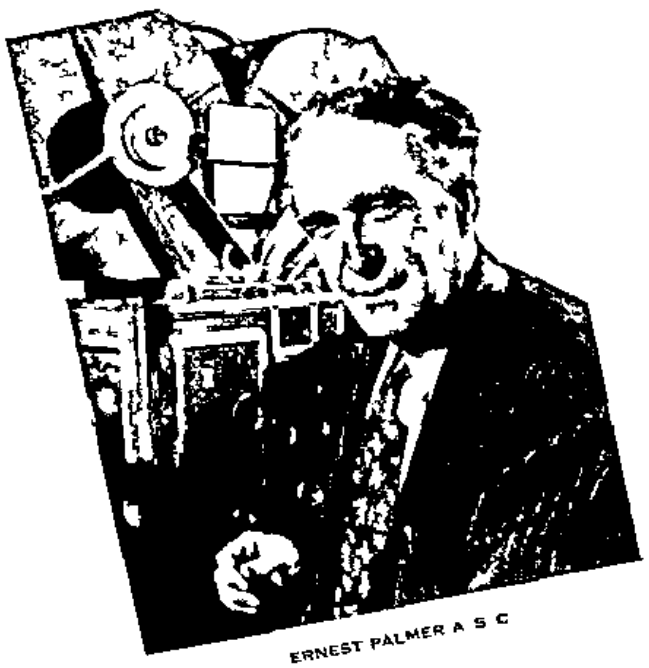
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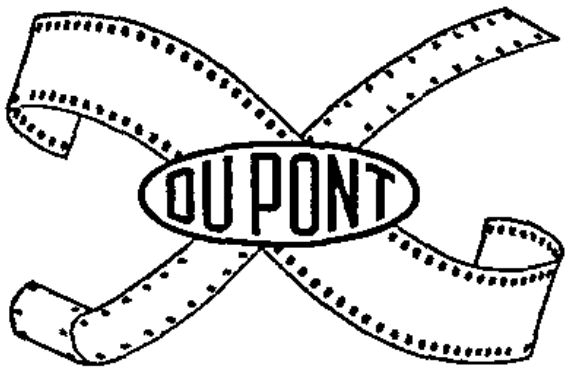


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INTERNATIONAL photographer

Vol. XIII January, 1942 No. 12

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Editor, HERBERT ALLER

Business Manager, HELEN BOYCE *Art Editor*, JOHN CORYDON HILL

Contributing Editors D K ALLISON, GEORGE HURRELL, J N A HAWKINS, ROMAN FREULICH, ERNEST BACHRACH, ALVIN WYCKOFF, WILLIAM V DRAPER, FRED GATELY, GEORGE SCHEIBE

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'Raggedy Ann"

By William Mortensen

COBURN PHOTOGRAPHS WILD ANIMALS FOR "THE JUNGLE BOOK"

And Never Again Could the Most Tempermental Star Upset His Poise

As far as Bob Coburn personally is concerned the temperament exhibited by Hollywood's brightest shining stars will never be able to feaze him again

Compared to the caprices of the tiger the black panther the bear the elephant and the numerous other wild animals he has been photographing since production started months ago on Alexander Korda's huge picturization of Rudyard's Kipling's immortal "The Jungle Book" the outbursts of our beautiful blonde ladies and stalwart gentlemen, will seem like weak flashes in the pan The problems coincident with photographing the girls and boys of the studios will seem like nothing compared to the headaches connected with still photoing their four footed cousins

When Bob started working on The Jungle Book in the giant man made jungle at Sherwood Forest he was sure that after sixteen years as one of Hollywood's ace still cameramen there was little connected *with his craft that he hadn't experienced* How little he knew and how wrong he was, he soon came to realize

As a matter of fact Coburn received his baptism of fire several weeks before the actual start of the picture when he accompanied Sabu star of the production to the Goebel's Lion Farm to make a series of publicity photographs Sabu had been going daily to Goebel's for over two months and was on friendly terms with the animals They all knew him and worked easily with him It looked very simple

But when Bob went into the cages he found it was a different story The animals were suspicious of him and resentful of his little black box He managed to keep in front of all of them until a large tiger suddenly became angered slipped past Sabu and took a swipe at the camera Coburn's experience as a hunter stood him in good stead He remained calm and the situation passed without mishap

A short time later the product on department requested him to make a series of photographs of an enormous twenty six foot python which was to be used in the picture Bob went about the job in his usual thorough fashion made thirty or forty shots of the animal from every angle including its wide open mouth After fin hing Coburn inquired of the owner whether the reptile was dangerous

"Not said the owner unless he bites you If he does he'll probably strip all of the flesh off your arm

Bowed but unbent Coburn left the scene But after these two preliminary skirmishes he got his second wind and settled down to the actual business of photographing the picture Soon he realized that all of the usual methods were useless The animals and scenes must all be caught in action and in most cases entirely unknown to the animals and to the actors

Every precaution was taken by the company to protect the actors and crew but nevertheless most of them were working directly in the open with the animals most of the time For this reason the set was always deathly quiet and there was no movement behind the camera that could possibly be avoided

Coburn wherever possible secreted himself behind a tree or a bush close to the Technicolor camera with his own two cameras in front of him arranged so that he could operate them with only slight movement He used at all times a 4x5 *Graflex and a Contax With the Contax he* took each bit of action in color while the Graflex recorded the scene in black and white

Using these tactics Coburn managed most of the picture without great delay although the hesitancy of the animals—none of which were the tame variety—in going through their scenes nearly drove him to distraction on more than one occasion Everything would seem set and he would be certain that he had achieved everything necessary for the perfect picture when the animal would suddenly stage a temperamental scene and delay would occur Often hours would pass before the animal could be tricked into doing the desired bit of business By this time Coburn would be hanging by his toes from a tree trunk awaiting the mood to strike the beast

The elephants proved the easiest of the four footed animals to handle Trartable and natural born comedians they responded beautifully to every bit of direction

The most difficult and most dangerous were the black panthers Although Sabu and the other actors worked right alongside the beasts, Coburn conceived the idea of erecting a glass enclosure through which he photographed the scenes Himself in visible to the animal and with the enclosure killing all sound he was free to work without disturbing anyone other than the harassed technicians who were constantly stumbling over him The results however were worth the effort the blanck panther shots being among the best of the lot

One of the principal characters in the story is the grey wolf. And certainly one of the most treacherous The particular wolf assigned a leading role was trained for months before he was given to Sabu for further handling At last it was believed that the animal was entirely safe and he was started in the picture At all times he was guarded most carefully and everything was done to keep him from becoming excited

But one day he reverted to type and frightened Coburn more than he was frightened during the entire picture Sabu had gone to the crest of a hill with Coburn for some special photographs The wolf seemed happy and was going through his paces apparently with good grace

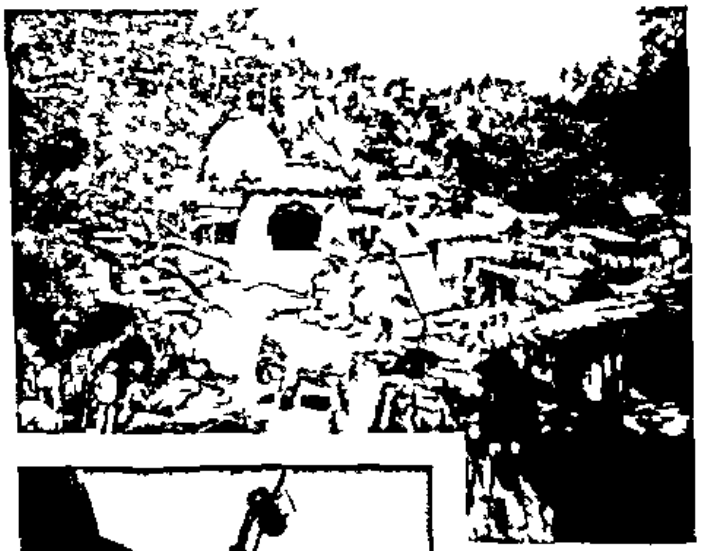
Coburn instructed Sabu in a certain pose wherein his face was quite close to that of the wolf Looking through his ground glass Bob noticed a sudden glint in the animal's eye as the wolf spied the jugular vein in the boy's throat In a second Coburn threw himself to one side to attract the animal's attention while Sabu arose Naturally shooting was over for the day Those sharp fangs were entirely too bright to satisfy anyone at the moment

But although they were not exactly as blood thirsty as were their wilder four footed actors Coburn's most trying thespians were the monkeys There were hundreds of them used in 'The Jungle Book and of all the unmanageable curious and generally nerve wracking creatures in the world they were the worst Every time Bob got near enough to them to shoot a picture they would point towards him and let out a scream If possible they would make a lunge at him and land either right on the lens of the camera or atop his head Coburn finally managed to get his shots by disguising himself as a tree trunk—a walking tree trunk—and keeping his camera a dead secret from the curious simians

It might also be added that as if the animals were not enough to make Coburn's task on *'The Jungle Book" an extremely* unusual assignment, there were hundreds of birds in the air most of the time a most unpleasant situation in itself Coburn's present assignment as still cameraman on Ernst Lubitsch's 'To Be Or Not To Be with an all human cast, seems like a vacation for which he thanks his stars (Jack Benny and Carole Lombard) every day

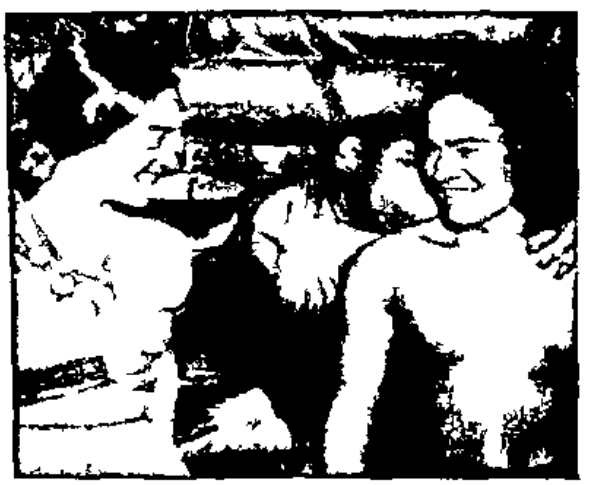














By Robert Coburn









T p left to r ght Messua, Mowgl s mothe s Ro ema y De Lamp young c een and rad o actress She is pictu e l in authen c East Ind an sar and jewels Mowgl The F og as playe l by Sabu fo een year old P t cia O Rou ke selec ed by Alexande Ko da to play the ole of Mahala She is a h gh school g l w th no prev ous expe ience on the screen Lo v

The h ee llainous dlanns Bull o p ayed by Joseph Calle a accom panied by the barbe (John Qualen) and the P nd t (F ank Puglia) trek th ough the t eache o s jungle n sea ch of the fabulous Lo t City of gold and jewels



Mr and Mrs Robert Taylor and Howard Hawks at Floren tine Gardens



Pat Hawkins, baton twirler for junior orchestra, Hollywood Legion Post, assists Abbott and Costello to make their mark in the forecourt of Grauman's Chinese Theatre



Ann Shirley, Marjorie Wind worth and Ray Rogers at Bilt more Bowl

Magazine Photography

By Hyman Fink

Hyman Fink whose photographs of motion picture stars appear exclusively in the McFadden publ cat ons, in the following article gives some interesting slants on his work Mr Fink questions the loose handl ng of the word "cand d" as the reader will gather from the text below Hyman Fink s family came to California in 1904 and settled on a ranch at the corner of Western Avenue and Sunset Boulevard This makes Hyman almost a native son. He has been interested in photography from the time he could handle a camera and at an early age started his career in commerc al photogra phy "Hollywood on Parade" was shot by Hyman with an Eyemo He worked with Freeman Lang in the early days of premieres and now as staff photographer for *Photoplay Movie Mirror* and *Radio Mirror* he is one of the most popular fan magazine photographers in the business.

(Editorial Note)

Nearly all of my work is done w th a min ature camera because neither the cam era nor the supplies for its operation are cumbrous to carry I use the four by five for color work fashion work or large groups Otherwise the min ature camera is very satisfactory if *properly handled*—and that is important.

Motion picture stars and those who may become stars are most cooperative They real ze the importance of be ng pl otographed in prominent places and having these p ctures appear in fan magazines as one of the best forms of advert s ng insur ance against being forgotten In Europe if you come across a house that is a *hun* dred years old the people who live there can tell you who built it who has lived in it through the years They usually know the n ne ghbors and the history of the c nity If you make five bad pictures and

one good one they talk about the good one We all know the result of five good ones and one bad one here The bad pic ture is well remembered thus showing that we do not live up to our tradition as we should Very few of us know our neigh bors who built our houses or anything about their history Thus it is that if a star is off the screen for any length of time he or she is forgotten except as we may hear someone ask What has become of so and so?

These pictures we make for the maga zines are appearing all the time If you ex amine a studio contract list I believe the



William Vaughan Paul and Deanna Durbin at Tom May party

maximum number of players l sted will not exceed 200 and usually it is below that The result is that the players will get only a small percentage of the publicity they would get if seen in swanky public places where Hollywood news photogra phers gather to snap their pictures An other advantage that these photographers offer is that many picture personalities that have not yet become established get a break and often the newcomer who cannot afford a publicity agent gets some good in ternational publicity

In the early days the only people whose names or pictures appeared in the fan magazines were top stars in the major studios The supporting players seldom were mentioned and the only publicity that went out was that released by the studios



Judy Garland, Ann Rutherford and Mickey Rooney

It is quite different now Many players who have not yet had their big chance get a break through the fan magazines Today all big publishing houses have their staff photographers here in Hollywood to take care of their needs

These shots often are spoken of as "candid photography The word "cand d is grossly misused It all started with ama teur photographers who shot pictures at bad angles and out of focus and in general did the subject more harm than good In order to alibi for their ignorance of pho tography they called their pictures can d d and the stigma remains A candid camera is any camera that a photographer uses in which he gets a *bad* p cture

When making a shot I watch the flash hit the eyes and mouth of the subject and in a split second I know what the f nished picture is going to be

Joan Crawford tops the l st as being the

(Continued on Page 9)



Sally Payne, Deanna Durbin, Virginia O'Brien, Ann Rutherford (seated), Robert Stack, Bill Shirley, Jackie Cooper and Maureen O Hara

MGM Production

Stills by Ted Weisbarth











Judy as Blanche Ring singing "Rings On My Fingers" Mickey's portrayal of Walter Hamden in Cyrano de Bergerac Elsie Janis watching him



Judy's impression of Sarah Bernhardt Mickey's idea of the graceful Carmen Miranda while Carmen herself looks on with a Mona Lisa expression.



Reading down Mickey Rooney impersonating Harry Lauder Judy Garland as Fay Templeton Mickey as a well known great American actor

"babes on broadway"

In 1939 it was "Babes In Arms," presenting a new standard of screen entertainment In 1940 it was "Strike Up the Band," going its predecessor one better And now it's "Babes On Broadway" Metro-Goldwyn-Mayer again brings together Mickey Rooney and Judy Garland America's favorite sweethearts and greatest entertainers, in its third extravaganza of youth, fun and music

Mickey will be back as you like him best. The king of the box office will sing dance produce a show within a show and present a series of new impersonations topping everything he has ever done before

Judy also a member of the select ten favorite stars, will keep pace with him throughout, singing as she alone can sing dancing and even doing some impersonation on her own

Mickey's impersonations include two new ones of Carmen Miranda and Sir Harry Lauder which have brought howls from all those privileged to see them in

Stills by Virgil Apger



Mickey Rooney and Judy Garland introducing a modern version of the old time hoe down in Metro Goldwyn Mayer's "Babes On Broadway" Here they illustrate the dance which they hope will become even more popular than the La Conga The steps which are described by the words of the song combine some of the old fashioned dance with the latest rug cutting jive Reading left to right "One two Swing your partner lightly" Mickey grabs Judy around the waist and swings her off the floor, around him and onto his knee This is where the modern swing fans will come into their own Next they swing into action, frantically circling each other and coming together thusly When dancing in a crowd they even can change partners as they do a speeded up version of the early day square dance Third illustration "It's putting its toe down and kickin' its heel" And that's exactly what they do first pointing their toes at the floor, then stamping their heels, meanwhile dancing wildly around each other Last "Cause hoe down's on its way!" After doing the first hoe down step and shuffle forward again, they wind up in this screwball finish These fundamental steps are simple enough to score a quick hit with the dancing youth of America

rehearsals Highlight of Mickey's performance, however, is expected in a skit titled 'The Convict's Return" bought for him from the New York show, 'Streets of Paris" In it he will play eight different roles, running off screen to make each change

Judy will give her impression of Sarah Bernhardt, Blanche Ring singing 'Rings On My Fingers Bells On My Toes," and Fay Templeton singing "Mary is a Grand Old Name" She also will sing 'How About You' and the title song of "Babes On Broadway," both by Ralph Freed and Burton Lane, Chin Up—Cheerio—Carry On ' by Yip Harburg and Lane, and will sing Franklin D Roosevelt Jones" in response to requests she has had ever since the number was introduced several years ago

The story is one of talented young Americans who make their headquarters at the Pitt Astor Drugstore while waiting for a chance to land a role on Broadway Mickey and Judy are two of these youngsters who grow discouraged at their failure to get started and decide the only way to win recognition is to produce their own show

When their show is linked with a broadcast by British refugee children to their parents in England they win their big opportunity Broadway's most important producer sees the show and makes their dreams come true signing them for his own New York production

Busby Berkeley will direct Babes On Broadway following his success with "Babes in Arms and "Strike Up the Band" Arthur Freed also produced both former pictures

MAGAZINE PHOTOGRAPHY

(Continued from Page 7)

favorite of most of the fan magazine photographers and for two years in succession won the award for being the most photo generous of the feminine players This year Rita Hayworth and Bob Hope were elected But they are all grand sports and give us the greatest cooperation as long as they know we are with a legitimate organization and not out just to bother them—and most of them have had unlimited experience with pests who do You learn to love these motion picture people and they kindle within you an ambition to give them your best

As to what is interesting and what is news I use my own judgment although occasionally I get assignments from writers to illustrate stories

Once in a while we say Oh nerts! This happens when some new cafe opens or some other event is publicized An invitation will be sent to every star in Hollywood then a list of these names will be sent to news men and photographers with the announcement that these stars will be present We get there to find not a person we know and it doesn't take us long to get away

At the moving picture studio most of the work is done in the daytime But with us it is at night There might be a cocktail party in the evening then nothing happening until the theatres let out at 11 30 About 2 00 A M we finish up and go home In the intervening time we sleep, eat, do all our developing and printing caption our pictures and write a little story about what we have done Aside from that our time is our own Then there are trips to Palm Springs, Del Mar and other places

In the last World War during my final three years I served as a radio operator in the Merchant Marines which work I would go back to if called in this conflict During that time I made travelogue pictures

When asked about the handling of miniature equipment I use Eastman film and paper and have found that the developers and formulas recommended by the manufacturer of the film usually are the best as they have spent time and money in making them so The old saying that "Cleanliness is next to godliness is very important when applied to the handling of film, although confidentially, my darkroom is not very clean However it is dust free Development is done by time and temperature and inspected at least once during development This has saved many a negative which might have been over or under exposed If city water is used film must be scrubbed with a viscose sponge before drying

I get letters from young men all over the country who want to come to Hollywood and become photographers I give them the same answer as the Honolulu Chamber of Commerce sends out (or at least they did before the war)—"there are ten men for every possible job here in Hollywood and unless you have enough money to last you for six months and a way to get started, Hollywood is a good place to stay away from It is impossible to get a job at the studios no matter how good or how bad you are"

COATED LENSES

By William C. Miller

Reprinted from the Journal of the Society of Motion Picture Engineers, September, 1941, Page 265

(Concluded from December Issue)

Due to the number of steps involved in the production of a finished process shot, it is necessary to apply every known means of reducing the losses of picture quality to a minimum. Since these are primarily losses of brilliance and contrast the very features that treated lenses enhance the application of this treatment to both the projection and camera lenses used in process work is of great value. Reports of the results obtained in this field are definitely satisfactory and gratifying.

Another of the major problems encountered in the process work is that of screen illumination. Constant efforts are being made to increase the light output of the projection systems used in this work. Gains of 10 to 20 per cent have been the subject for loud rejoicing. Yet actual tests by the studios have shown that by treating the projection lenses gains as high as 30 per cent are to be had. One studio had a peak screen illumination of 21 000 lumens with untreated projections lenses. After treatment 30 000 lumens were obtained. This is an increase of 6000 lumens.

In straight production work the results are no less interesting. Treatment of lenses has so reduced ghosts and flares that it is now possible to apply hitherto unusable methods of set illumination. This is particularly true of low key sets.

There have been several successful pictures made during the past year in which low key lighting greatly enhanced the atmosphere of the picture. No small part of the success of these low key scenes was due to the clarity and brilliance with which they were reproduced through the use of treated lenses. Intense local lighting did not mask out shadow detail or cause ghosts of any sort.

Of particular interest was one shot made in a dark hallway, of two characters approaching cautiously with a flashlight. Quite by accident the flashlight was turned full into the lens of the camera. But contrary to expectation the shot was not ruined for no flares appeared and the dimly lighted faces of the two characters could still be clearly seen over the brilliant image of the flashlight.

The reduction of flares or ghosts is so great that tests with treated and untreated Astro lenses shooting straight into the sun show a flare trace of one ghost with the treated lens which before treatment gave thirteen conspicuous ghosts.

As the results obtained with the treated lenses became available and comments and criticisms from the users drifted in, the need for more research work on the process became obvious. A harder and more durable treatment was definitely needed. The research program that was undertaken in our laboratories had for its objectives four primary aims. First it was desired to produce films that were much harder than anything available at that time. The aim in this respect was to produce films which were just sufficiently softer than the underlying glass to permit the removal of the film without damage to the lens element should the removal be required. Second this hardness must be obtained by means other than baking for it was felt that to subject precision optical parts to high temperatures was decidedly detrimental. Third, the films must be sufficiently resistant to vapors to eliminate any tendency to fog in normal use. Fourth, the efficiency of the films must not be impaired while *obtaining this increase in hardness*.

Many months of intensive experimental work were devoted to this program. Several methods of improving the process were discovered, but the final method was so superior to any of the others that it was made the subject of patent application.

Where previously the removal of dust from a treated lens with a soft camel hair brush had often resulted in damage to the coats the new hard ones could be handled with no more care than any good optical element deserves. Test samples were subjected to very severe treatment. Finger marks were repeatedly placed on them and successfully wiped off. They were allowed to lie around the laboratory for long periods where they accumulated dust and dirt, which was then removed without damage to the treated surfaces.

Those acquainted with the fragility of the early coats would be astonished to witness demonstrations of the hardness of the coats when they are jabbed and scraped with wooden sticks breathed upon and wiped with cloths without damage. One of the most popular tests is to rub a sample through the hair to coat it with oil and then to return it to its original efficiency and unblemished state by rubbing it with a cleaning pad.

This welcome durability was obtained without loss of efficiency of the films as was the intention. Coated surfaces reduce the reflectivity of polished glass to 1/8 or less of the original value. Sample glass disks coated on both sides, but only in the center, give a most interesting demonstration of the efficiency of the films. When held between the observer and the sky the treated central portion is decidedly brighter than the surrounding untreated area, due to the increased transmission. These same samples held between the eye and some dark background such as black pavement show a brilliant ring around the untreated edge where the bright sky is reflected in undiminished intensity. The treated center however, appears quite dark and the pavement beyond can be seen without difficulty whereas it is seen only indistinctly elsewhere through the glare of the reflected skylight.

A camera lens was treated for demonstration purposes so that only one half of each element was coated and the treated halves were lined up so that they were all on the same side when mounted in the barrel of the lens. Either by reflected or transmitted light the effect is most impressive. By reflected light, the iris diaphragm is barely visible through the glare of the light reflected from the untreated halves of the first four surfaces while through the treated half it is clearly visible as well as interior details of the lens mounting as far back as the last element. When viewed against the sky, the treated side of the lens is markedly brighter than the untreated half. When a dark object surrounded by a bright background is viewed through the lens by an observer in the dark, a good demonstration is obtained of the benefits of this treatment. The untreated half of the lens is seen illuminated by light from the bright background reflected and re-reflected between the untreated surfaces. The treated half is dark, however since any light that reaches the eye has suffered at least two reflections from treated surfaces and is therefore, reduced to 3/4 of the intensity of the light

(Continued on Page 13)

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Portable light control board developed by Al "Heavy" Franklin head of Electrical Department at Columbia Studios

columbia's light control board

The Portable Light Control Board is one of the most important technical improvements in motion picture lighting in recent years

This instrument a panel board housing eleven separate dimmers was developed by Al "Heavy" Franklin head of the electrical department at Columbia Pictures

Franklin impressed with the confusion which resulted from a number of different men using dimmers on sets which needed ultra-delicate lighting conceived the idea of housing a group of dimmers in one panel board He worked on the idea until he had a small compact board built on the lot It was so small and light that he decided it could be put on wheels, moved to any point of the set with the camera

The value of the new Portable Light Control Board is immediately evident The head gaffer can stand beside the camera and handle all of the lights He can dim a light as a person comes into the scene beat it up for more distant shots He has perfect control of the entire lighting equipment If necessary on an extraordinarily large set, two of the portable panels can be used thus giving twenty two dimmer connections

The equipment was first tried out by Cinematographer Joseph Walker and his head gaffer George Hager during the filming of Here Comes Mr Jordan It was so effective that Franklin was given an okay to construct six more of the boards so that they would be available for any company confronted with a lighting problem

The panel boards were used for You Belong To Me and Bedtime Story

Like all technical improvements in the industry plans for the Portable Light Control Board were made available to other studios with the result that other boards, patterned after Franklin's innovation are now being built on other major lots

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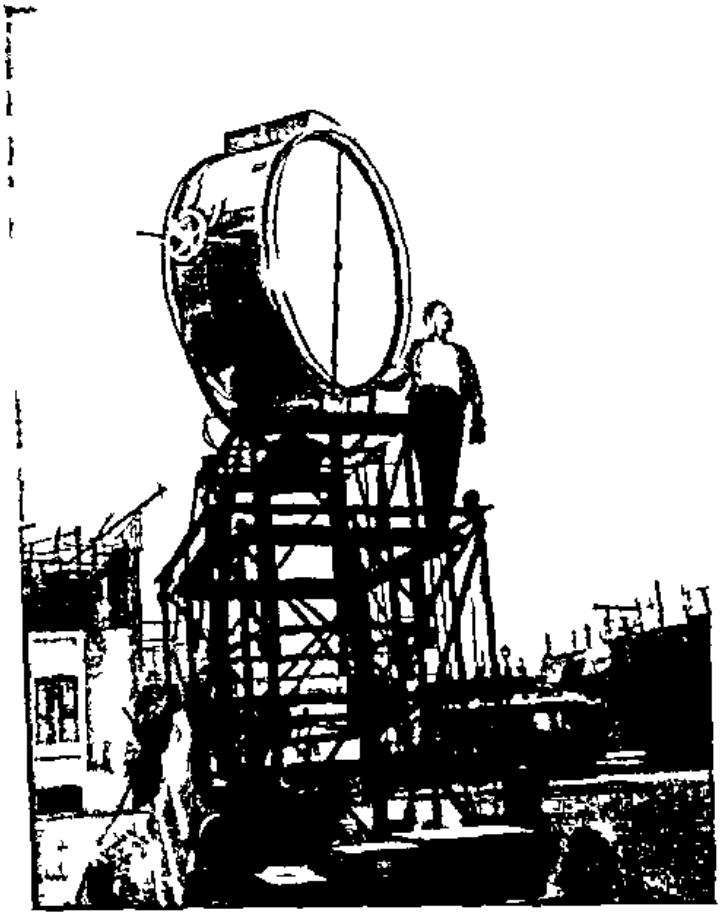
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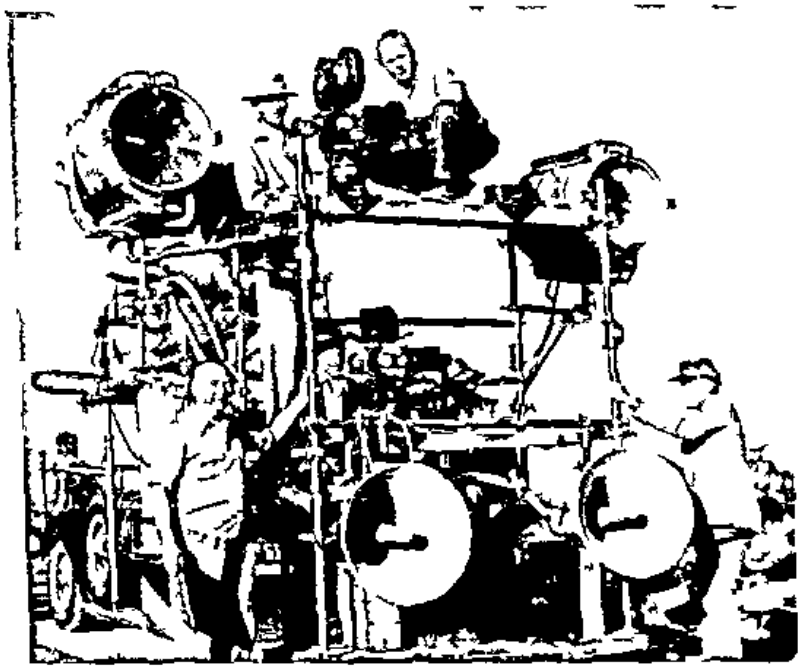
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odd SET-UPS









Perched on an elevator is a "60" arc lamp the largest used in motion pictures. Below is loud speaker and playback used on Rio Rita. Sun Arcs were too deep to throw the proper lighting on the horses so lights were rigged up on trucks and horses and lights moved in synchronism

Ray June with underslung crane on a balance. Lower King Vidor and Bob Young planning a shot



Sab i as Mo gl utte s his dis ess call to his f ends of the jungle



Sabu s friend Baghee a, the black panther and two g eat spotted leopards.



The great l opard, a magn ficent one who appea s in one of the amazing an mal oles



Raksha the mother wolf leads Mougl to the lo t cuty of he jungle.



Shere Khan the tiger who finally meets he fo e of villains.



Mowgl b ngs Mahala (Pat cia O Rourke) to the fo gotten temple and defends her f om the Wh e Cob a



The village outside the temple now overgrown by the jungle and inhabited only by wild animals



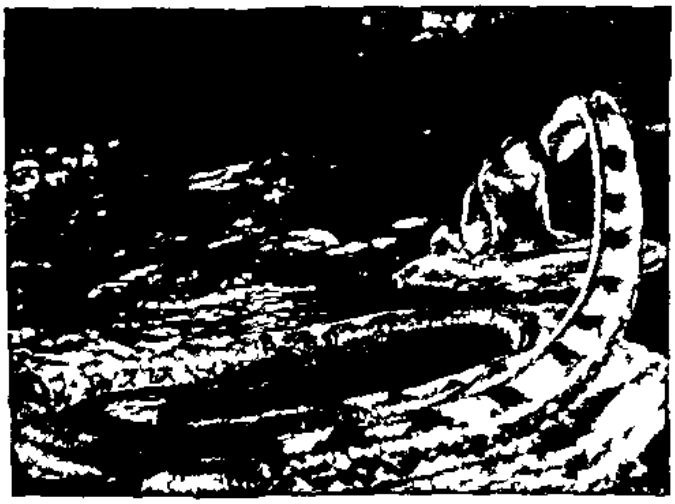
Mowgli holds counsel with the elephants as to his plan for rescue of the village from the burning homes



Having been reared by the animals of the jungle Mowgli's return to his native village is looked upon with fright and suspicion



Accused of being a witch man by Buldeo (Joseph Calleia) Mowgli gives the wolf call to summon his jungle brothers



Mowgli receives sage counsel from that oracle of all wisdom, the great snake Kaa



Mowgli goes for a joy ride on the back of Rama, the East Indian bull brought here especially for the picture

RESEARCH IN MOTION PICTURES

With Mister and Missus moving picture theatre goer ready to pounce upon the slightest discrepancy in history costume or social life of any particular period the research department of a studio becomes one of the greatest foundation stones in the building of a picture

Alone in her book lined office within the huge library that comprises the Research Department proper at Twentieth Century Fox Studios sits Frances Richardson From there she directs a staff of workers in preparing pertinent material for each picture that comes along Months and sometimes a year before a picture goes into production Miss Richardson is busy gathering odd facts about the physical emotional and social aspects of life—what people wore what they did what they thought Her research department covers all phases of life except music which comes within the province of the Music Department under James O Keefe And O Keefe explains that each musician because of the nature of his professional education is his own research expert The music department however does include an extensive library with some 100 000 songs in it

My Cal Sal is Miss Richardson's current pressing problem Period pictures are always complicated subjects for research but not all are as difficult as this famous tale of California in the 1830's

The Civil War period is definitely authenticated with numerous photographs eye witness drawings and copious penned accounts A photograph of Dr Samuel Mudd whose role Baxter played several years ago was found in the collection of the works of Matthew B Brady famous Civil War photographer and it supplied Arthur Levy head of the men's wardrobe department with an accurate design for clothes Out of the innumerable volumes on style including the famous Godey's Ladies Book" fashion stylist Gwen Wakeling designed gowns for Miss Stuart

The most difficult question for Miss Richardson to settle concerning "To The Shores of Tripoli" was the type of shark that swam around the old military prison Shark Island Even this was ascertained without seeking outside the 10 000 volumes in the research department—Miss Richardson's cross index system brought forth a colored plate of the shark showing it to be white below and brown on top

Costuming is a comparatively simple matter Standard research volumes have been published at various times by the University of California and these are replete with sketches and drawings Stylist Wakeling says she studies and absorbs as much information as possible until I can project myself into the period"



Frances Richardson head of the Research Department at Twentieth Century Fox Studios

But there are other details of early California life that are still difficult to unearth Miss Richardson read through two volumes of the works of Hubery Howe Bancroft, famous nineteenth century historian to learn about a game called Snatching the Rooster for example

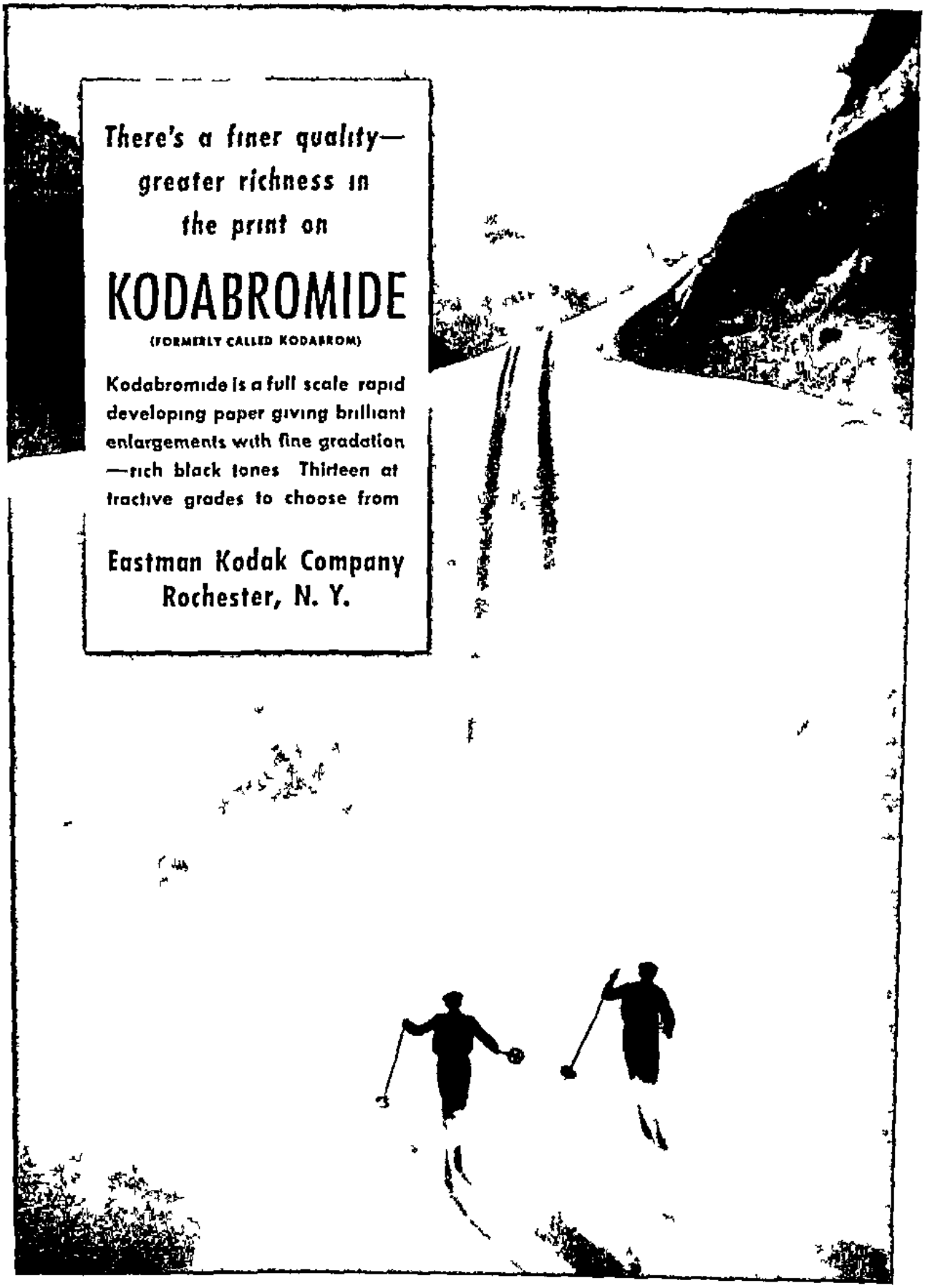
Once in a while Miss Richardson's double index system fails For instance a while back a sequence was to be included showing the celebration of a Judas night In not one of the learned tomes was there mention of a "Judas night." Even the California Historical Society was in ignorance of it Finally through the assistance of Miss Laura Cooley of the Los Angeles Public Library an authority on early California some old magazines were unearthed from the storage room and Miss Richardson went through them It took her three days but Miss Richardson finally found out that Judas night was a Hallowe'en like custom celebrated by the young men of Monterey prior to 1881 when it was discontinued through the efforts of a priest On the evening of Good Friday Judas would be burned in effigy in the town square along with rakes hoes fence posts and other movable objects stolen by the people who participated in the festivities

Then there was the question of the real California barbecue Probably no other social custom has been so mangled by time as the barbecue Source books produced a dozen different explanations of what went on at barbecues how the barbecue was conducted Finally Miss Richardson thought of a friend she knew in San Francisco Mrs Edith Shorb Steele member of the famous pioneer Shorb family in California granddaughter of the man after whom Mount Wilson was named Miss Richardson wrote to Mrs Steele, and she in turn consulted a 90 year old relative Back came eye-witness information

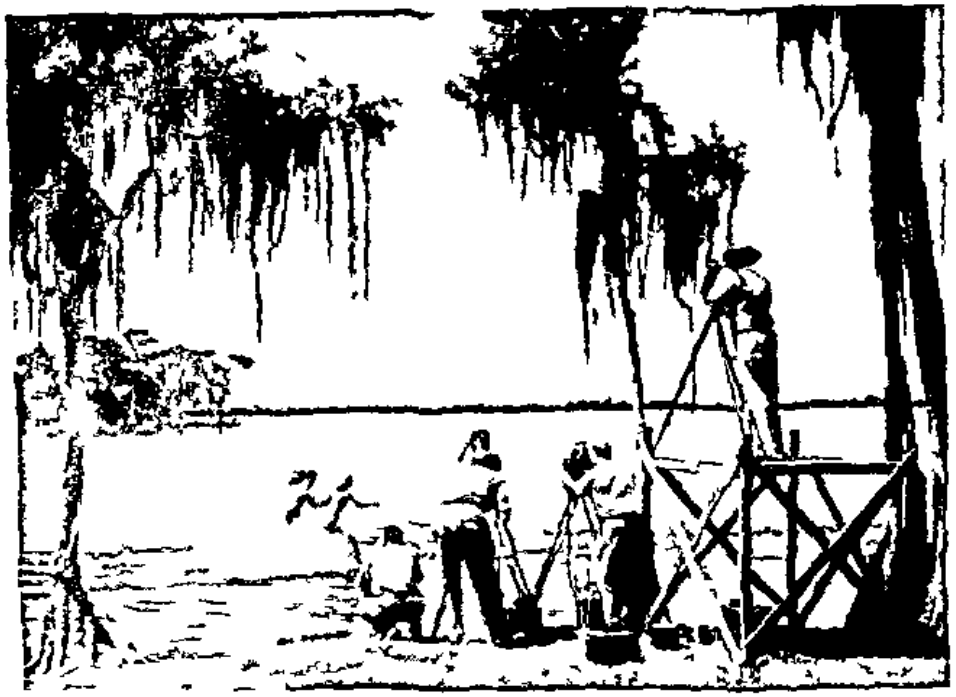
'A pit was dug three or four feet deep and varying in length from six to fifty feet depending on the size of the barbecue A fire was burned to coals and then flat rocks were placed on top of the coals Halved pigs and quartered beeves were placed on the rocks covered with leaves and brush and left all night

Guests of course would come from miles around and there was always dancing and singing for it was the custom that musicians were always invited in given wine and food and a piece of silver'

Frequently Miss Richardson's "research book on one production will run over 200 pages containing an index, hundreds of photographs sketches articles quotations and eye witness accounts It would seem she might be a very fine example of what is known as a well read woman


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outdoor color studio



Skiing is a lot of fun when it's not too cold. Here are shown newsreelers Al Waldron of Fox Movietone, Bill Gerecke of Paramount News and Joe Gibson of Universal Newsreel at Cypress Gardens, Florida.

This is a story of a Florida swamp land made into the nation's finest outdoor color studio in the brief time of six years. In the latter part of January in 1940 a handsome young man with a debonair grace, a green beret and a yellow jacket strolled into the clubhouse of the Cypress Gardens near Winter Haven and called in his New York brogue "Where is Dick Pope? I am behind the eight ball and he had better let me out." This lothario of the sidewalks of New York was Jack Painter, head Technicolor cameraman in the East for 20th Century and with his satellite D'Imers had come to Florida to make a magic carpet reel called "The Land of Flowers" and the reason Jack was worried was because Florida had just experienced the worst freeze in the history of the state and not a flower was to be seen.

It looked as though Jack was all caught up on Technicolor after having spent six months in Hollywood learning all about it, and no place to shoot.

The answer to it is that most of the reel of "The Land of Flowers" was made in Cypress Gardens, a 38 acre piece of ground of tropical gardens with flower banked winding canals. The Gardens had been protected against the cold by a battery of forced draft oil heaters.

The scenery was so good that instead of just one picture two were made at the Gardens, the other of outboard motorboat stunts for which Dick and Malcolm Pope have long been master performers.

Russ Ervin, fast moving Brooklyn boy shooting the Grantland Rice Sportlight for Paramount together with his brain trust and Rod Warren come back once or twice a year to the Gardens to make aquatic sport pictures.

Then came Charlie Boyle and a couple of boys shooting a Fitzpatrick Traveltalk and they shot azaleas, flame vine and bougainvillea and finally ended the picture with a sunset that made Fitzpatrick's tears splash when he bade farewell to this modern Garden of Eden. Newsreels and photographers began flocking in and going into Hollywood productions when they came into the Gardens for pictures because Dick Pope's crew of workmen moved big palms, azaleas and built artificial bridges, supplied parallels or anything else that they wanted, then the newsreel shots are always 200 to 1200 feet covering the subject so thoroughly so that if the title were stretched out it could be made into a one reel picture.

During the past winter Allan Davey, Otto Brower and Rube Boyce and other geniuses of Technicolor and 20th Century Fox came to the Gardens for a two weeks' stay getting scenes for "Moon Over Miami." Here the Gardens again echoed with the shouts of the boys as they looked through the view finders and you could hear Allan Davey yell, "Otto, this scene will be terrific." Then Brower would look through his view finder from another angle and would say "Pop it's colossal over here."

The scenery was so glorious for Technicolor that the only bad argument came when Dick Pope, President of the Gardens, tried to get Allan Davey's light top coat off and I accused the cameraman of working for California's Chamber of Commerce instead of Technicolor.

While 20th Century Fox was still working on "Moon Over Miami" in came Carl Berger to shoot two Unusual Occupations shorts, one on Jessie Stough, Cypress Garden's prominent model who was called the most photographed girl in the world whose job was just to pose for the amateur camera fans and this began to complicate things, but the Gardens are big so Berger ended up finally by shooting a picture of Dick Pope's brother Malcolm as the man who doubles for movie stars in water sport pictures. By that time 20th Century Fox had left and Columbia moved in to make the short "Aquaplay" with Jack Painter's handsome rival J. Berge Contner as first cameraman, Jack Etra carrying the batteries and Harry Foster with the megaphone.

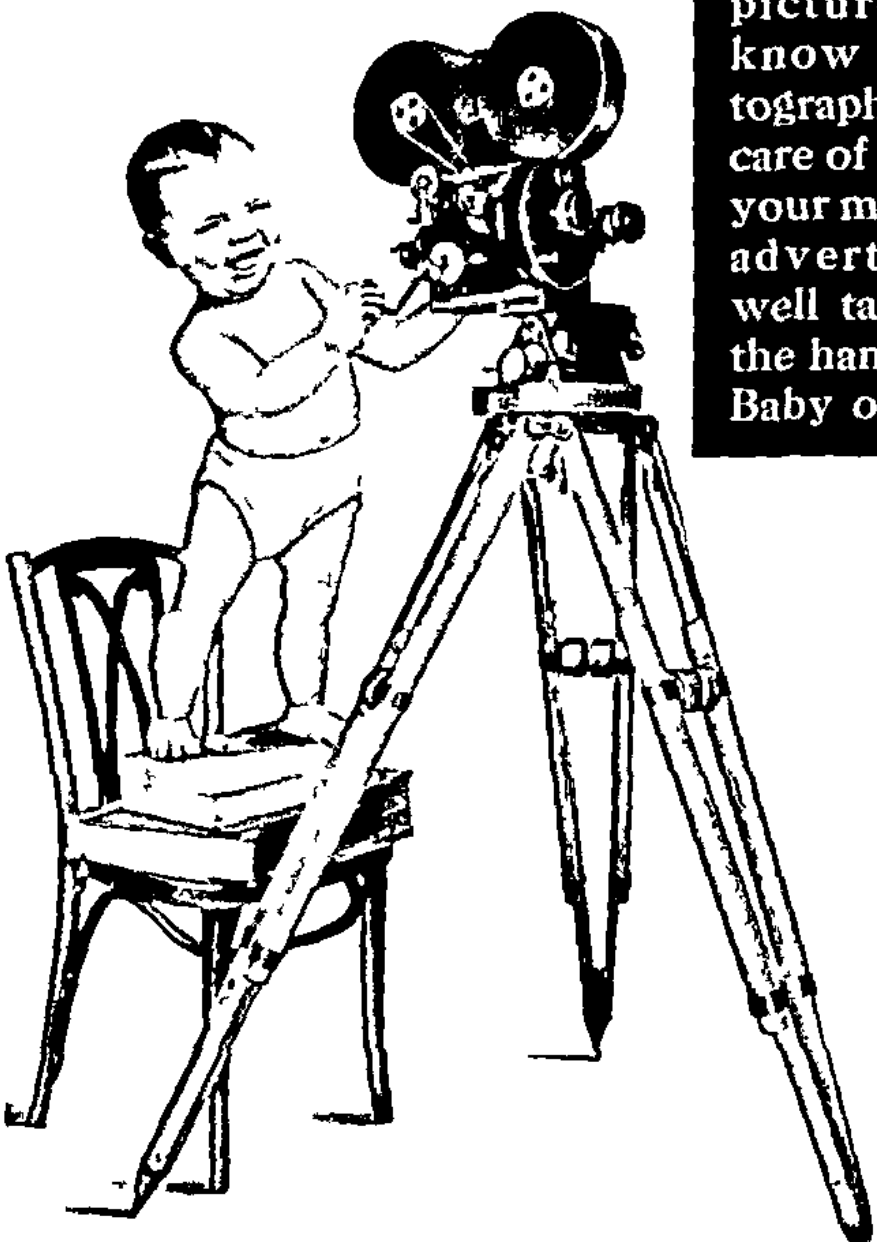
Then came the deluge and here we find newsreel boys, Al Waldron of Fox, Joe Gibson of Universal, Howard Winner of Pathe, Bill Gerecke of Paramount, Bockhurst of News of the Day, for a steady stream of some 50 or 60 newsreels of everything from flower queens to jumping outboard motorboat through a brick wall. For California's sake we will mention that many times the gorgeous bouquets of flowers carried by the queens were made from manufactured products especially for the occasion by the California Artificial Flower Co., while the bricks in the brick wall floated because they were quart ice cream boxes.

All together Dick Pope has staged 198 newsreels and shorts and now since he has built the Gardens into what is termed by every cameraman who sees it—"the nation's finest outdoor color studio" he feels sure that many of the Hollywood units will avail themselves of the opportunity of working in a place where the scenery is not only perfect, but also the cooperation so efficient that Boots McCracken went eight days without taking a dyspepsia pill because things rolled along so smoothly. Allan Davey was even able to stay up until 10 o'clock at night three nights in a row because of the ease with which the pictures were made.

Every cameraman says it is a pleasure to go to Cypress Gardens because they all get lovely little whistles to blow which is the system used at the Gardens to get pictures going and they have quantities of parallels, lead tin and gold reflectors, camera boats and barges and a fleet of rubber tired wheelbarrows that can carry any load.

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YOURS TRULY, NORMAN ALLEY

This is the second of two personal letters written in the late Spring of 41 by Newsreeler Norman Alley while in South America and sent to Charles Saxton

Saxton collaborated with the globe-trotting Alley on the latter's thrilling book "I Witness" which has gone so far as to be endorsed and included in the national public libraries. The two will do another book this time for Lippincott upon Alley's hoped for return from the Philippines front

Saxton is here in Hollywood where he is authoring screen originals and radio material for the sensational Red Skelton

RIO Thurs., 9th

"Dear Charlie

"Your letter received in which you tell me you had the good fortune to see President Vargas' daughter Alzira when she was in New York. Yes, you're right—she's a great little lady! I saw the pictures of her christening that new 5,000,000 dollar Moore-McCormack liner "Rio de Janeiro" at the Chester Pa. shipyards. As I watched that little goddess of goodwill breaking a ribboned bottle of sparkling triple X across the big boat's bow I was reminded of an old timer I once knew around Chicago. Whenever on fitting occasion a toast was called for he'd lift his goblet aloft and propose: Champagne for our real friends and real pain for our sham friends!'

"Alzira's husband Commander Ernani Do Amaral Peizoto is the Dutch La Guardia of Rio de Janeiro State. Though mild mannered and an aristocratic descendant of the conquistadores Peizoto is an earnest worker for the long looked for uplift of the lowly peon. With his admiring father in law in the top driver's seat, he has been doing much for the little man of Brazil. It is caballeros of his caliber who want to eliminate places like Rio's Casoline Alley—which is shamefully akin to our own Tobacco Road.

"Juan took me on a tour of inspection of these sunswept slums the other day. Gasoline Alley—which is my own name for the nameless place—is a hellish huddling of hovels on a hillside overlooking town. There the centavo-shy short-enders live in shacks made out of discarded gasoline tins. Large families living in some of these tin-can tepees, but all the tenants wear a smile that's far from being rusty!

Living all by himself in one of these hi-octane haciendas was a nondescriptish fellow who was truly one for my album of memories! If I may ring in a pair o' paradoxes by the horns, he was scintillatingly sloppy, glamorously grimy. One look at the grizzle bearded dirty and tattered recluse and I immediately regretted that I hadn't brought my camera along. I wanted to make a news movie of him called, "Live Alone and Look It!" Juan acted as interpreter and I learned that the bewhiskered scarecrow's name was Julio. Julio—of all names!—which was the name of the very spick n' Spanish Argentine immortalized by Valentino in "The Four Horsemen of the Apocalypse."

"Juan told Julio that I was coming back on the morrow with my camera to make movies of him. Julio grinned to the extent of his three remaining front teeth and nodded. Then to bind the bargain I slipped him more pesos than he had seen in many a day and we left.

"Well Charlie, came manana and we journeyed back to the hillside huts to

Remember the Day?



Camera crew in "Cimarron"

keep our movie making rendezvous with old Julio Juan rattled on the fellow s door, while I et up my camera so as to get a nice candi l shot of the decadent mud turtle emergi g fi c m his rusty shell

Which he did—but I stopped shooting and well nigh collapsed The bristle vis aged rhaj ody in rags was no more

For Juli s all agog over the prospect of being in the movies had washed his shirt thrown away his old pair of pants for bright new ones—besides going hir sutely all out for a haircut and a smooth shave

I see as how Admiral Dick Byrd and his Little Americans (sounds like a dance or chestra) have struck camp down in Ant artica and I ve been hoping that Dick would touch here at Rio on his way home Byrd would be the right one for the de fense programmers to consult on that Greenland deal and help supervise the building of bases up there He s used to walking in cold and making the most of our frozen assets No denying then that in this respect a Byrd in our hand, is worth—well you get the idea!

Who was the worthy wit who said—what this country needs is a navy with a two way stretch?

I guess I didn t tell you about my flight to Rio in my last letter so here goes I ve clippered back and forth across both the Atlantic and Pacific during these past few hectic headline years but this jaunt to Latin America was more like a pleasure trip Only two days and 7 hours straight day l ght flying time from that moment when duty tore me away from what sub sequently proved to be a winning ticket in the Seventh at Hialeah until I got my first bird s eye peek at a picturesque peak in Guanabara Bay called Pao de Azucar—Sugar Loaf to you—and Sugar Loaf sure takes the cake What a spot for the late Gutzon Borglun or his son Lincoln—those chiseling chaps who whittle mountains into cameos—to carve out something in kind of say Marshall Deodoro who was the patriot proclaimer of these United States of Brazil!

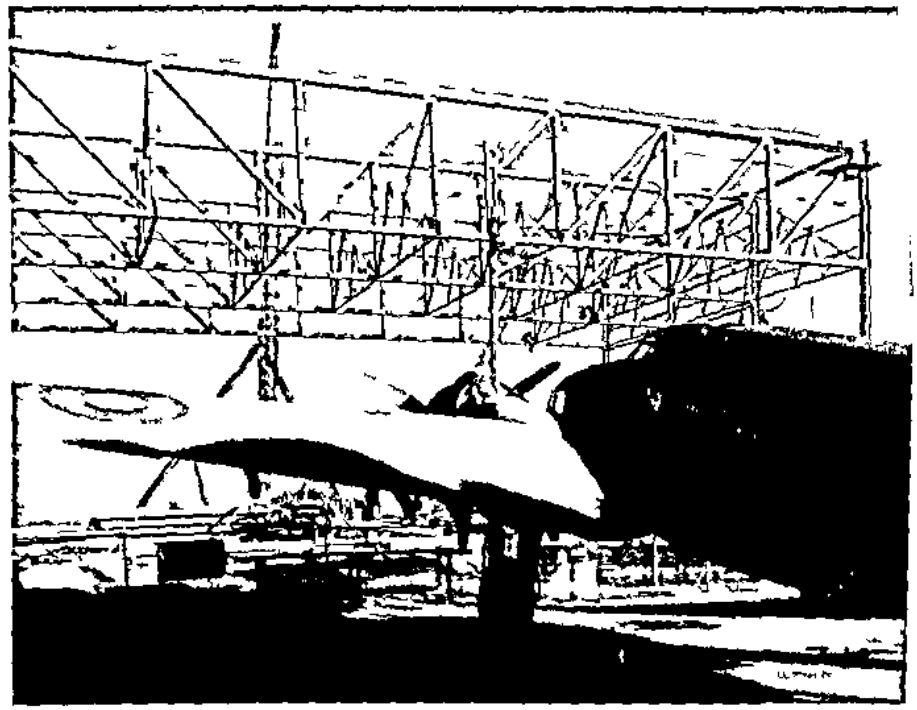
En route, our first night s setdown was at Trinidad s Port of Spain which is rem iniscent of Singapore except that the place has a cleaner sea swept odor It s a haven of turbaned Parsee merchants pigtailed coolies and all of the usual rest that go to complete the picture of a maritime cross road one only expects to find in the Far East

"Though sprawled out and scattered l ke an upstart Los Angeles Rio is right in there pitching when it comes to skyscrap ers But for all its lofty streamlined as pirations Rio de Janeiro still retains the quaint charm and color of the early Span ish in the New World

Window grilles behind which lurk a smiling senorita while outside a guitar strumming swain comes to serenade—of course you re familiar with that traditional

(Continued on Page 28)

lockheed's new hangar



Steel goes up on what is believed to be the nation s largest service hangar at Lockheed Air Terminal, Burbank, California Covering an area equal to one and one half city blocks the hangar is to be used exclusively for servicing Lockheed and Vega warplanes before they are turned over to the United States and British air forces

Adding more than three acres to the vast defense production empire of the Lock heed Aircraft Corporation and the Vega Airplane Company steel began to go up last week at the Lockheed Air Terminal on what is believed will be the biggest flight service hangar in the United States

It is expected that the hangar located at Maple and Winona streets adjacent to the airport, will be completed and in service within two months The magnitude of the job is revealed in the fact that the floor area totals 139 800 square feet equivalent to one and one-half city blocks

The main hangar will be 150 feet wide by 800 feet long enclosing 120 000 square feet of floor space In addition to this main structure there will be a two story office building containing 18 600 square feet a maintenance building compressor house fire department, first aid unit a test pilots oxygen room a police department an am bulance room and completely equipped machine shops

The main structure will have a concrete floor with supporting steel columns and steel roof trusses These trusses will be 16 feet deep and construction has been so planned that when completed the building will have a clear floor area 35 feet high from floor to trusses

Two features of the hangar expected to arouse intense interest among industrial construction engineers are the mammoth doors The one in the south wall will be 200 feet wide by 35 feet high and at the west end, 150 feet wide by 35 high both to be operated electrically

It is in the matter of the material re quired to build this huge structure that the need for defense priorities becomes appar ent Two million five hundred thousand pounds or 1 250 tons of structural steel will go into the building A window area of approximately 1 2 acres will require 54,000 square feet of glass 70 000 square feet or about 1 6 acres of galvanized iron will be used about two and a half miles of tubes will provide light in the 1300 fluorescent light fixtures all of which will be controlled automatically according to the brightness or darkness of the day by a photo electric cell

There will be 50 floodlights 25 000 linear feet about 4 7 miles of electric conduit will be used 100 000 feet, approximately 19 miles of wire and cable are required and enough electrical power to supply 21 square blocks of average residential occu pancy will be generated

TRADEWINDS

An Open Letter from Bell & Howell

During the months ahead, Bell and Howell will undoubtedly be called upon to play an increasingly important part in the National Defense effort. We shall respond willingly, enthusiastically, and with determination born of the knowledge that never before has our national security been so imperiled.

But with equal determination we shall continue a self appointed task which we consider no less important. Throughout the months to come, the Bell and Howell Engineering Division will continue its research and development activities. And so, when the problems of today are only memories, *when this country and the nations* that share our concept of freedom and liberty are once again in a position which permits regular commerce, it will be our privilege to offer Bell and Howell equipment which will establish new high standards of performance and durability.

Our dealer organization has been sympathetic and understanding throughout the difficult months already passed. The entire staff of this office joins me in expressing our appreciation of your cooperative attitude. Strengthened by your assurances of continued support, we look forward with confidence to a future which, however far distant, holds for all of us a promise of unprecedented opportunity. For photography has become an important ingredient in the American formula for living and there can be no question about the continuation of that form of living in the days which lie ahead.

Kalart Speed Flash Contest Has $750 in Photo Prizes

The Kalart Company announces that its Fifth Annual Speed Flash Contest is now under way. This popular competition has boosted its awards from $500 to $750 in photographic merchandise. Closing date of the contest is March 31, 1942.

An Anniversary Speed Graphic completely equipped with Kalart Range Finder, Master Automatic Speed Flash and Sutogun, will be the grand prize. Second prize is a $100 course in photography at the New York Institute of Photography. Third award is a Solar enlarger.

The contest is open to everyone, the only requirement being that the photograph be taken with a Kalart Speed Flash. Entrants may send in any number of prints mounted or unmounted. Both outdoor (synchro sunlight) and the indoor shots are acceptable. Color transparencies will receive the same consideration as black and white prints.

In addition to the ten grand prizes, the Kalart Company will have a monthly award of a Delur Ameco exposure meter for the best photograph submitted during each of the months of December, January and February. Pictures will be judged on human interest value, subject matter as well as print quality and lighting effects.

Entry blanks may be secured from your photo supply dealer or by writing directly to the Kalart Company, Stamford, Conn.

Switch Provides Light Control

Burke & James Inc. announce a new type of three position mercury contact switch for use with double contact socket and double filament bulbs to provide selective lighting in projection printing.

Light intensities of 50, 100 or 150 watts are instantly secured by manipulation of the switch. This enables the operator to regulate the intensity of the light passing through the enlarger or printer to the density of the negative. Control of the light intensity is not secured by a rheostat to cut the voltage—as that would affect the color of the light. Each filament burns at full recommended temperature to provide a white light of proper printing quality.

This new unit, known as the Solar Mercury Tri Switch, is designed for table top operation. It is of the single throw, double pole type with levers operating the mercury contacts for *silent, sparkless* operation.

It will be available from your local dealer, including switch, cords and socket for $5.50. Write Burke & James, Inc., 223 W. Madison St., Chicago, for full details.

Wabash Infra-red Lamp

Bottled ruby heat in the form of a new infra red ruby drying bulb has just been announced by the Wabash Photolamp Corp., Brooklyn, N. Y. The new ruby heat bulb has its color pigmented into the glass while it is still in its molten state. Designed for studio and darkroom use where speed in drying is essential it generates a flood of infra red rays that are converted into a deeply penetrating heat as soon as they strike film or paper. Their action is to penetrate deep into the surface of the film to start the drying process from the inside out. For darkroom use, the ruby glass permits the worker to turn from the relative darkness of safelight illumination to the faint ruby illumination given by the new

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Among the uses suggested for the new Ruby Heat Lamp is its application for speeding up the drying of ferrotyped prints or prints drying on blotters or stretched cloth drying frames, and the quick drying of single films or strips of roll film

The new bulb will be made in the one 250 watt size, in the PS30 natural ruby glass, with a burning life of 6,000 hours, and listed at $2 00 each Data on the application of infra red Heat Lamps can be had from the Wabash Photolamp Corp., Brooklyn, N Y.

Superimposed Titles Direct on Prints

The Rapid Film Technique, Inc, New York, N Y, has just installed equipment to print superimposed titles direct on prints Since there is no negative required, new as well as old prints can be used The latter feature is especially important for countries where only a small number of prints are required The cost of this process is very reasonable and considerably below the negative process The operation of this new process is being supervised by Messrs M Frenkel, Martin L. Lowy and H R Kossman, all of whom have been associated for a long time with the laboratory end of the motion picture industry The West Coast representative is Fmby Products Company, Los Angeles, Calif

News from General Electric

Blue Mighty Midget Mazda

Development of a blue Mazda "mighty midget" Photoflash lamp No 5 has been announced by General Electric's lamp department This new synchro-press midget flash bulb will be made available January 1

Need for the new tiny blue flash bulb, Nela photo experts said, has grown out of the widespread use of miniature cameras designed for color photography The blue No 5 is however, also adaptable to use with larger cameras

Color coating on the new blue mighty midget has the same characteristics as that of the familar G-E Mazda photoflash lamp No 21 B It has been carefully matched by Eastman Kodak Company to the color characteristics of Daylight Kodachrome

Size and shape of the new G E No 5 bulb are identical with the clear No 5, Nela engineers say the new blue midget will do for color photography what the famous G E Mazda mighty midget bulb has done for black and white photography

It gives the color photographer the small bulb size that goes hand and glove with easy portability More than two dozen may be conveniently carried in the coat pockets And the same goes for photographic effectiveness when the new G E blue mighty midget photoflash lamp No 5 is used in a proper reflector designed for its use

New 22 Photoflash Lamp

A new shredded foil photoflash lamp, incorporating the latest research and best features of several G E Mazda photoflash lamps, has just been developed The new flash bulb, named "No 22", is designed to simply the G E Mazda photolamp line and will be available January 1

The new G F Mazda Photoflash 22 is rated at 60 000 to 65,000 lumen-seconds light output This is 20 000 more lumen seconds in light than is produced by the familiar 16 A flash bulb and 10,000 more lumen seconds than light produced by the present No 21 lamp In size and shape the new No 22 is identical with the present No 21

Among other claims made for the No 22 G E Mazda Photoflash lamp by the manufacturer are the following It is an all purpose lamp for those flash needs where great quantities of light are required from a single source It makes available to photographers a flash bulb producing increased light output with a wide peak yet without sacrificing peak height Besides plenty of total light, the new No 22 is said to have ample flash duration consumes relatively little current, and is specially fused for satisfactory use on high voltage circuits None of these advantages, it is pointed out, are at the sacrifice of proper flashing of the new lamp by means of batteries

The new 22 should, it is believed, find wide use in synchronized photography in the taking of color pictures and in the commercial and press photo fields

Prices Reduced on Three GE Midgets

Retail prices of three G-E midget Mazda photoflash lamps were, in effect, reduced from 13 cents each to 11 cents each These flash bulbs are the G E Mazda "mighty midget" synchro press No 5, SM "speed midget," and the No 11

The new 15 percent reduction the G-E Lamp Department announcement from Nela Park stated, applies to purchases of not less than one carton of six midget lamps Federal excise tax is included in the new list price of 66 cents per carton

This "price reduction" it was explained, is made possible by a revision of G E photolamp department s sales plan and a constantly growing demand by the public for the three most popular G E Mazda photoflash lamps

It was also announced that net prices of G E Mazda photolamps to all quantity contract consumers were substantially reduced today as well

More GE Reductions

Another substantial reduction affecting the list prices of G E Mazda fluorescent lamps effective January 1, has been announced by General Electric's lamp department

Price reductions affecting the most popular F (fluorescent) lamps in the G-E line, for example, are the following daylight and white types 14 watt T 12 from 90 to 60 cents, 15 watt T 8 from 75 to 65 cents, 15 watt T 12 from 95 to 80 cents, 20 watt T 12 from 95 to 80 cents, 30 watt T-8 from 95 to 80 cents, 40 watt T 12 from $1 35 to $1 15, and 100 watt T 17 from $3 00 to $2 60

Also announced were substantial price reductions affecting soft white and colored G E Mazda F lamps

The reduction marks another step in the downward trend of the cost of Better Light for Better Sight. G E Mazda F lamps, since they were first introduced in 1938, have been reduced in price as much as 60 per cent

The new drop in the price of these lamps is held as being especially significant now when so many of them are being used to supply cool, efficient "indoor daylight" for defense industries . to spread production, cut down waste and protect the eyesight of defense workers

Nela Park officials attribute the price reduction to the growing demand for G E Mazda fluorescent lamps in all fields This, they say, has resulted in many manufacturing economies in General Electric's fluorescent lamp factories In line with G E lamp department's traditional policy, these savings are again being passed on to consumers through reduced prices of the product

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16MM. DEPARTMENT

Government Films Train Defense Machinists

The first of a series of more than fifty machinist and industrial training films, prepared under the direction of the United States Office of Education was no sooner off the drying rack than it was put to use before an audience of machinists operators and apprentices in one of Chicago's defense plants Following the initial showing of "Cutting a Spur Gear," the film will be repeated before smaller groups within the plant under instructor guidance for more intensive training

The Bell & Howell Company, Chicago in addition to its own intensive use of the films is devoting its film library channels to the loan and sale of copies to industries schools and other organizations Printing and general distribution is handled by Castle Films, under government contract It is noteworthy that Eugene W Castle, head of Castle Films, was in charge of all motion picture activities in the Republican national campaign of 1940

Before the middle of November at least eighteen of the subjects each playing from ten to thirty minutes, will be available The reaction of the audience at the initial Chicago showing was uniformly favorable C A Zielarth general superintendent of the Bell & Howell Company, said "It certainly is a long step forward from the days when I learned the machinist trade These films show the what of machine tool use so a man can give his whole attention to the how —that's still up to his own head and hands

The films may be purchased at a price that represents bare printing and shipping cost with the entire expense of actually producing the negatives absorbed by the government as defense cost A score of the country's leading producers of industrial commercial and educational motion pictures have participated in the production of these films

SOME RANDOM NOTES ON KODACHROME

On several occasions we have mentioned that the handling of Kodachrome emulsion requires an entirely different approach than black and white and noted in our "little black book" that we intended to go into this more fully in a later column, but as nearly as we can recall this is as far as we got. In one of the meditative moods that frequently follow when we realize with a start that another month has rolled around again and that a page of blank white space is waiting to be filled, speculation was aroused as to the reason why many people without any black and white experience, as amateurs, will turn out consistently better results with Kodachrome than those who have been making pictures for a long time with the monochrome medium and why some professionals find the transition to the Kodachrome medium a particularly difficult one We have come to this conclusion That it is the preconceived notions of what a photographic emulsion will and will not do that is causing all the trouble In short it is the approach

To begin with, a standard black and white emulsion has a considerable range of latitude in exposure—and just plain latitude It averages about 128 to 1 for an average normal development This implies several things, which have come to be taken for granted by an experienced photographer First of all if his exposure is *anywhere nearly correct* a successful picture will result, and any errors in his evaluation of the lighting conditions will be lost in this latitude if these errors are not of a serious nature Thus if an exposure meter is used a "band" of film speed values will be sufficiently accurate for the purpose at hand and also any slight inaccuracies in the meter functions are of no consequence

Then comes the lighting Because of the wide range of latitude in black and white, brilliant highlights and soft, full shadows are easily held within the film range of the medium, there being no danger of "spilling over" into the "toe" and "shoulder" of the sensitometric curve if a reasonable degree of care is exercised in the shadow highlight ratios Moreover, there are times —and these occur frequently—when it is *desired* to have a "kicklight" go into the upper region, or the "shoulder," and to have the shadow low enough to just permit an outline of detail and then fall off into nothingness in the background, a process which calls for the lower "toe" portion technique

Allied with the lighting problem is the ability in black and white to pick almost any angle for a particular picture, and if it does not already conform to photographic requirements (in an exterior) it can be made to do so by "booster lighting" or by manipulation of the exposure-development printing technique

Working with Kodachrome, *all this changes* Where the latitude was great in the black and white emulsion, it is practically nil in Kodachrome The 128-to 1 ratio shrinks to 4 to 1, and where certain types of duplication (for printing) are used to 2 to-1 The first and *basic*, requirement

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this implies is absolute precision in the evaluation of the exposure It is not enough to just use an exposure meter"—the so called "permissable errors" of the instrument are of sufficient magnitude to render a reading entirely inaccurate Readings must be made not only with a *thorough* understanding of the instrument but with careful consideration

In lighting for Kodachrome the usual wide range of highlights and shadows must be held to within a narrow band It is for this reason that a completely flat lighting is recommended by many the contention being too that the color will furnish the desired contrast A "kicklight" must stay within the range rather than spilling over But it is the shadows that give us the big problem Where in black and white a background is permitted to "fall off" it must be held to the proper level or else it will very quickly fall into the "toe" of the curve and when this happens instead of having a soft delicate shadow as in black and white we have a muddy looking blush green cast that hits a discordant note—*hard!* Combining this with the complete washout of color and detail when a highlight spills over the result is anything but pleasing! We wish to emphasize that even the *minor* deviations from the correct ratio will give an incorrect color rendition the slight overexposures due to slight overlightings causing blush casts and the slight underexposures due to under lightings causing reddish casts All this is assuming that the color temperature of the illumination is being held to a correct value!

Where we picked angles at random in black and white we must now pick them with the new medium in mind Angles which will show backgrounds into which no light can be pumped and which are below the necessary level and hence out of range must be avoided because the background will not just pleasingly fall off Added to that it must be of a color that will not detract from the center of interest THERE IS NO POSSIBILITY OF ANY MANIPULATION OF THE EXPOSURE DEVELOPMENT PRINTING TECHNIQUE IN KODACHROME—THE PROCESS IS LOCKED!

There are two methods of printing Kodachrome—by Kodachrome duplication that is printing directly on Kodachrome from the original and the second method is to make three-color separation negatives from the original and to use one of the three color printing processes now available Regardless of which method is used it must be remembered that no improvement can be made upon the original by manipulation of these processes as is the case in black and white, where the contrast and density can be juggled to produce a result from a negative that is not up to par In fact when Kodachrome is used it must be borne in mind that if a straight duplication process is to be used the contrast of the finished picture will be greater than the original and it must be lighted accordingly

The three color separation process of printing is a story in itself And we are saving it for a near future issue

PATENTS

By ROBERT W. FULWIDER, *Patent Attorney, Los Angeles*

No 2,261,253—Film Sound Producer *Ralph H Heacock* assignor to Radio Corp of America Appln September 1 1939 5 claims

A film soundhead having a constant speed sprocket and a holdback sprocket geared to the first sprocket both driven by a single gear with a connection to the holdback sprocket for driving a projector

No 2,262,521—Light Control by Polarization *Joseph A Ball* assignor to Technicolor Motion Picture Corp Appln March 13 1939 4 claims

A light control device in which one polarizing member polarizes the light, and a second polarizing member may be rotated to vary the amount of light passing through it

No 2,263,000—Gold Sound Track in Motion Picture Film *Leopold D Mannes* and *Leopold Godowsky Jr* assignors to Eastman Kodak Co Appln Oct 5 1939 In Great Britain Jan 23 1939 4 claims

A method of forming sound color pictures in which the silver sound track is first gold toned then pictures images changed to silver and dye images and then removing all silver images

No 2,263,140—Process For Producing Luminols Photographs *Fructuoso Vargas G* Mexico City Mexico Appln June 17 1940 In Mexico Dec 5 1939 1 claim

A luminous photograph consisting of a positive transparency against a backing sheet having a luminous coating

No 2,263,179—Ignition Primer for Photoflash Lamps. *Lloyd D Lockwood* assignor to Westinghouse Electric & Mfg Co East Pittsburgh Pa Appln Dec 30 1938 3 claims

A primer for photoflash lamps which is ignited by the filament and which in turn ignites the combustible material in the lamp

No 2,263,316—Sound Track in Light Polarizing Film *William H Ryan* assignor to Polaroid Corp Appln Sept 10 1940 18 claims

A sound track adapted to polarize a part of the light passing through it the amount of polarization varying with the amplitude and frequency of the recorded sound

Blackout Photoflash Lamps

General Electric announces the development of two blackout photoflash lamps—each of which is designed to permit the taking of pictures at night without revealing the customary flash to the eye Both lamps Nela Park engineers assert produce the nearest approach to perfect blackout from photolamps yet attained

The smaller flashbulb is called G E mighty midget blackout photoflash lamp No 5 R and is identical in size and shape with the Mazda "mighty midget No 5 lamp The larger blackout flashbulb identical in size and shape with the conventional G E Mazda No 21 photoflash lamp will be known as G E blackout photoflash lamp No 22 R

The two new blackout flashbulbs will be made available as of January 1 to photographic departments of newspapers Signal Corps, Air Corps and certain other government divisions

List price of the midget G E blackout flashbulb will be in the neighborhood of 23 cents that of the large blackout lamp will be in the neighborhood of 30 cents

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They Say···

By RELLA

Photo by Bob Coburn



● Art Arling Technicolor cameraman on all under water sequence "Reap the Wild Wind now in the United States Navy as Lieutenant Junior Officer Arling has had a busy and successful year and in leaving he said that the boys at home can best help those who serve by preserving the splendid local union of which he is a member

● Don Hooper whose book on Basic Photography is widely read and a former member of Local 683 is now in service as Lieutenant Junior Grade United States Navy Don has done considerable 16 mm work in Kodachrome

● Jack Young wearing a proud smile these days His son Richard Leonard Young is writing the sports column under his own by line Dick Young in the Daily News New York What Jack used to produce in his camera is now pounded out on the type writer by Dick

● Homer Van Pelt leaving as Chief Photographer in United States Naval Forces

● Off to the East and points thereof newsreel cameraman Norman Alley for News of the Day Joseph Rucker for Paramount and Mervyn Freeman for Pathe News

● Al Brick now in Honolulu was the first newsreel cameraman to get shots of the bombing of the island The film was brought in on the Clipper and dispatched to the President of the United States before release to motion pictures

● Paul Martin of Walt Disney called to service in the U S Navy Doyle Nave of Walt Disney Studio whose famous 20 second forward pass in the Rose Bowl Game of 1939 has also been called to duty in the U S Naval forces

● Archie Stout also handling photography on the Harry Sherman Productions

● Rolla Flora of 20th Century Fox Special Effects Department is an expert in the use of optics

● Leon Shamroy tagged to a new contract at 20th Century Fox

● Al Brick of Fox Movietone News, and Harry Jackson, Junius Stout and Al Cline of 20th Century are presumed to be safe in Honolulu

● Everyone hopes for a speedy recovery of Lt Milner Vic Milner's son, who was recently injured during the training of one of the air cadets

● Trace back to the February, 1941 issue of INTERNATIONAL PHOTOGRAPHER and you will find newsreel cameramen rehearsing preparations for an air raid on Seattle Looked upon as premeditated hysteria at that time events of today prove that newsreelers have a keen sense of anticipation Upon his return from Europe in 1940 Norman Alley newsreel cameraman of News of the Day addressed a group of motion picture tycoons He told them of the grave danger facing this country and the direct and destructive methods of the Nazi military machine Some became alarmed, others claimed that he was unduly excited and suffering from hysteria and the remainder passed it off as charming conversation It would do well for the representatives of industry to listen to the laboring man Freedom is an ideology the worker cherishes most and he can never ignore its perilous position Thus it was that Alley more than a year ago understood and made known of things to happen

● Art Reeves and his first love (speaking camera lv, of course) are back together again Over at his Camera Supply on Cahuenga Boulevard he has the complete Bell & Howell No 1 camera that he used early in his career as a cameraman Art has never lost touch with the whereabouts of this camera which now stands proudly near the front of the store so that he may gaze fondly at it whenever he drops in This camera is not for sale but Art will welcome anyone who wants to stop in just to admire it

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● Harry Davis reporting for duty immediately as Lieutenant in United States Navy Harry was a member of the Photographic Division Signal Corps American Expeditionary Forces in the last World War



Photos by Frank Powolny

● Sol Halprin first cameraman Twentieth Century Fox of many years standing who has been in charge also of process at that studio leaves for service in United States Navy as Lieutenant Senior Grade

Film Making for the Army

By Kenneth Macgowan

Sgt Bob Churchill until recently of Fort Monmouth, reported on film making for the Signal Corps at the Associat on's meeting of October 16 With Don Robertson and several of the Army's films to supplement his remarks Churchill managed to convey some sense of the magnitude of this film making project to Association members A year ago the entire unit consisted of three soldiers and a couple of civilians today there are some 250 writers cameramen, cutters and animators working at top speed to turn out the 700 films that the Army has already ordered And new requests for films come in daily

The request for any particular training *film originates in the branch of the service* that feels the need for such a picture The order is sent to Monmouth where writers prepare the script A camera crew is then put in the field to shoot the film on location a process that can take anywhere from a week to five months The crew returns with its footage to Monmouth and the film is cut under the supervision of its director and writer The completed job is shown first to the War Department for its approval and then sent on to the arm that requested the film originally

The Monmouth unit works under Col Gillette who has headed the division for years Its job is to turn out 35mm and 16mm subjects to supplement camp training lectures and demonstrations Ten morale films (nine under the direction of Hollywood's Garson Kanin) are under way at present, but most of the more dramatic type picture is left to Zanuck's unit on the West Coast Gillette's films are rather how to do it pictures intended solely for Army showing and their nature is conditioned by that fact Straighforward and simple most of them avoid even the use of sound effects to dramatize their material and rely instead upon the intrinsic interest of the subject and well written commentary to hold the soldiers attention Examples shown at the meeting won favorable comment as solid workmanlike jobs Bob Churchill also ran his own little one-reel comedy WHAT TO DO WITH YOUR SPARE TIME IN THE ARMY to the approval of his audience

Health Education Opened By American Film Center

The establishment of a section on films in health education and medicine at the American Film Center was announced today by Donald Slesinger Director of the Center at its office 45 Rockefeller Plaza New York City Adolf Nichtenhauser M D is in charge of the section

The new section will be a clearing house and information center on the use and production of health education and medical films

The Section on Health and Medical Films has received a three-year grant from the Rockefeller Foundation

The American Film Center an educational organization supported by the Rockefeller Foundation was established in the summer of 1938 Among the members of its Board is Kenneth D Widdemer Director of the Committee on Neighborhood Health Development

IN THE MAIL

By Juan Paige

In reading the other day of the purchase by a major studio of the film rights to a Saturday Evening Post serial which has a fictional to-do with espionage activities in the Pacific islands I am reminded of one more instance where the wide-awake listening posts of the studio story departments have been caught with their plans down This story was kicking around all the studio story departments sans one whit of interest until the sudden Japanese stab in the back"

Army and Naval commanders in the field are forthwith called up on the Washington quiz carpet for failing to be on the alert—but the FDR's of the film industry let their sleeping subordinates slumber on, albeit the big bosses are nightly praying for a story that will hit the box office jackpot.

None so blind as that wide awake he who will not see—whereupon so-called indolence becomes sheer insolence I am speaking specifically of the apparent go-by that has been given to Norman Alley's non fictional thriller "I Witness." A great chunk out of this book would make for one of the finest movies to be generated by this new war in the Pacific

Action packed and joyously jammed with photogenic episodes—though all part of one grand chronological pattern—"I Witness" has practically one-third of its 3 0 pages dealing with the drama-dripping scene in the Far East, the Sino Japanese mess, and brings home to the American reader a pretty thorough idea of just how a Tokyokel boy hopes to make good in a big war

Wilfred Funk published—and one reviewer the estimable Jay Lewis of the close-to-the-navy Norfolk Ledger Dispatch said "When it comes to vivid pictures in prose candid as a camera I'll take "I Witness" over the works of Ernest Hemingway Its phrasing is often brilliant and its sentences have an impact that drive their meaning with the force and precision of an electric hammer"

Elbert Turner of the Houston Post, says in part, "Alley's account of the defense of the Chinese Alamo (Shanghai '37) is a superb piece of writing" Here is a book that will be read at one sitting Exhilarating as the east wind it excites the interest, amuses thrills entertains and instructs"

Included in the book is Alley's own story—with many hitherto untold dramaticisms—of the sinking of the USS Panay by the Japs on the Yangtse upon whose doomed decks he stood—at great risk of life and limb—and photographed the dynamiting of the doughty little inland river gunboat in all its indicting details.

There is no denying that the shameless bombing of the Panay was a shogun's sly rehearsal for today's Pearl Harbor

There's a night's reading and an evening's movie in "I Witness"—and I should resent any producer or story department brain to write in and tell me that my tongue's hanging out a foot until he has curled up in that quiet little super bomb shelter at the watery bottom of his swimming pool and read it for himself!

MORE ABOUT FILTERS

By George Scheibe

Filters what good are they and why should they be used? Well, there are many reasons why they should be used The use of my Monotone Filter will tell you immediately why a filter is necessary for it will tell you the weak spots in a picture It will tell you when to use a filter on the sky and if there are any clouds how strong you want them in your picture

There are many kinds of Graduated Filters to bring them out strong and also to turn the sky black as ink This is called over-correction, but in many cases it is just what you want in a picture and many times a necessity for certain effects

And at times you want to change a daylight scene into a night-effect In this case I make a long filter about 14 inches and longer for a slow change And often you would like to have a London fog effect come into your picture and at will you can change it into any density grading it as dense as you wish And in changing from a bright daylight scene into a fog effect, I make filters any length to create this effect.

Then too you can use a Diffusing Screen This will give your picture beautiful soft effects with good perspective You can use any degree of diffusion to an extreme effect. There are many kind of diffusion for stationary shots and for dolly-shots where the camera moves up to a close-up and you can increase the diffusion at will

There are many long filters in use Many kinds of filters are now made to accommodate the cameras in use any style of filters you might want be it Graduated Fog or Diffusion

Then too you can use the Hotspot Iris which will eliminate the hotspot entirely on background shots Used on the projector it will eliminate the hotspot that appears in the center of the screen Moving the Hotspot Iris back and forth you will find that the hotspot is gone and you will get an even shot of the background

And here we have the Cloud Filter which will throw the shadows of clouds across a landscape as natural as seen in nature

It is a long filter and run across the lens very slowly with a 25mm or slightly longer focus to keep the clouds fairly sharp and as they look in nature. Next time you wish that there were some clouds passing over the landscape then think about my Cloud Filter

Yours Truly, Norman Alley

(Continued from Page 21)

romantic vignette Well Charlie the giggling girl at the window is still here as is the lovesick boy who comes to serenade beneath The guitar? Alas! That's gone because—well, the sidewalk serenade has been modernized

"You see, the young man who would go window wooing now brings along a portable radio! Cupid as it were is right there with a Crossley! Thus the lovely lady is lulled by the Spanish symphonies and like o' that coming from the Latin American stations—while the curbstone Romeo is left with both hands joyously free for the clutch

"The spell is only broken by the commercial cut in of an unromantic announcer blasting out for all to hear that they owe themselves a bath with Lifeluxe Or have you smoked a herring lately?

"I expect to plunge into the semi interior next week and get a first hand gander at a speeded up rubber plantation unless the official okay comes through for me to hop down to Montevideo whose geographical fame was brought up to date by the scuttling of the Nazi raider Graf Spee There was one news event I'm sorry my camera missed Anent the sunken ship I see where two salvage divers lost their lives trying to probe the bowels of the Graf Spee That's irony Scuttlers live on—while peaceful fellows who try to salvage perish

"Huh! Whaddya know? Juan just breezed in to tell me that the Nazi freighter Hermes has just pulled into port here after running the British blockade from Bordeaux

"Excuse me then pal, while I dash down to the harbor for a leasing look-see

Adios for awhile

NORMAN"

Hollywood's ideas on what constitutes lavish production has been outdone by the U S Marine Corps whose ideas run much bigger than Hollywood's

Preparing to leave with a 20th Century Fox troupe for San Diego where he will film scenes for the Technicolor production of "To the Shores of Tripoli" at the Marine base there Director H Bruce Humberstone received a message of regret from one of the commanding officers

"I am very sorry" the message read, "that you will have to spend the first couple of days at the base somewhat handicapped. I would suggest that you spend that time doing close shots as we will only be able to let you have 600 Marines After that, the several thousands you will undoubtedly need will be available"

The message didn't explain how 600 men could be squeezed into a close shot.

A FAMILY RESEMBLANCE

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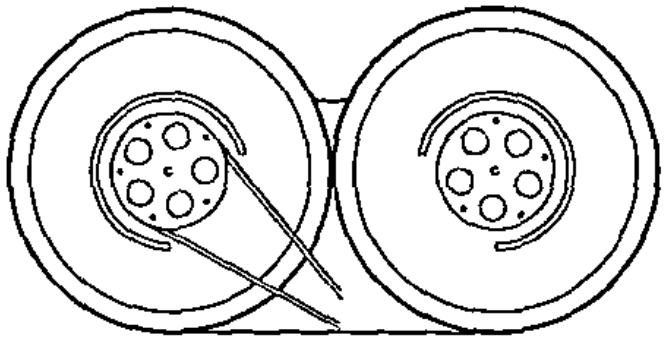
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INTERNATIONAL photographer

Vol. XIV February, 1942 No. 1

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Editor, HERBERT ALLER

Business Manager, HELEN BOYCE *Art Editor*, JOHN CORYDON HILL.

Contributing Editors D K ALLISON, GEORGE HURRELL, J N A HAWKINS, ROMAN FREULICH, ERNEST BACHRACH, ALVIN WICKOFF, WILLIAM V DRAPER, FRED GATELY, GEORGE SCHEIBE

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INTERNATIONAL PHOTOGRAPHER, as the monthly official publication of International Photographers, Local 659, of the International Alliance of Theatrical Stage Employees and Moving Picture Machine Operators of the United States and Canada not only represents the entire personnel of photographers engaged in professional production of motion pictures in the United States and Canada, but also serves technicians in the studios and theatres, who are members of the International Alliance, as well as executives and creative artists of the production community and executives and engineers of the manufacturing organizations serving the motion picture industry INTERNATIONAL PHOTOGRAPHER assumes no responsibility for the return of unsolicited manuscripts or material

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Important Notice

Following is a letter just received from K M Cunningham, Motion Picture Film Department Eastman Kodak Company, Rochester, New York Cameramen, studios and laboratories are asked for their usual ready cooperation to overcome this critical condition

It is indeed unusual for you to receive a suggestion from this organization but we have one now which, due to the present emergency we believe merits your attention

"Here the facts

"Steel is on Priority—must be conserved for an all out defense program Steel is required for making cans which hold film shipped from the film manufacturer to the studios and laboratories No practical substitute has been found for containers for the raw film The film manufacturer, therefore, must buy back cans to maintain and ship the industry's requirements of motion picture film

"Since August we have been buying film cans from the industry In August the situation was serious Now it is CRITICAL

"We suggest that the International Photographer inaugurate a campaign, bringing home to the industry the necessity for returning immediately to the film manufacturer those cans in which raw film is received

"We are planning in forthcoming issues, to use the space we take in the International Photographer to further this program

"Those are the facts

"We hope you will take favorable action"

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"The Balkan"

By William Mortensen

(The Bauman Piece)

NINETY below

If you shiver when the thermometer goes down to 50 degrees cheer up that's a very cozy temperature. Right here in California where we have the best of everything (and you might even add the letter B to that)—the highest and lowest points in the United States and all the other best advantages about which we are a bit snooty when talking with a brother from Florida we may now add to our list another one of the coldest spots on earth. Wouldn't you say that *90 degrees below zero* is a bit nippy? Well start shivering—we have just that! But don't worry, you can't ever get near it on a warm day. It's out in the Low Temperature Laboratory at the Douglas Aircraft Company. Here Douglas engineers conduct tests that will show what happens to a flying fortress when it reaches a height of 35,000 feet or more.

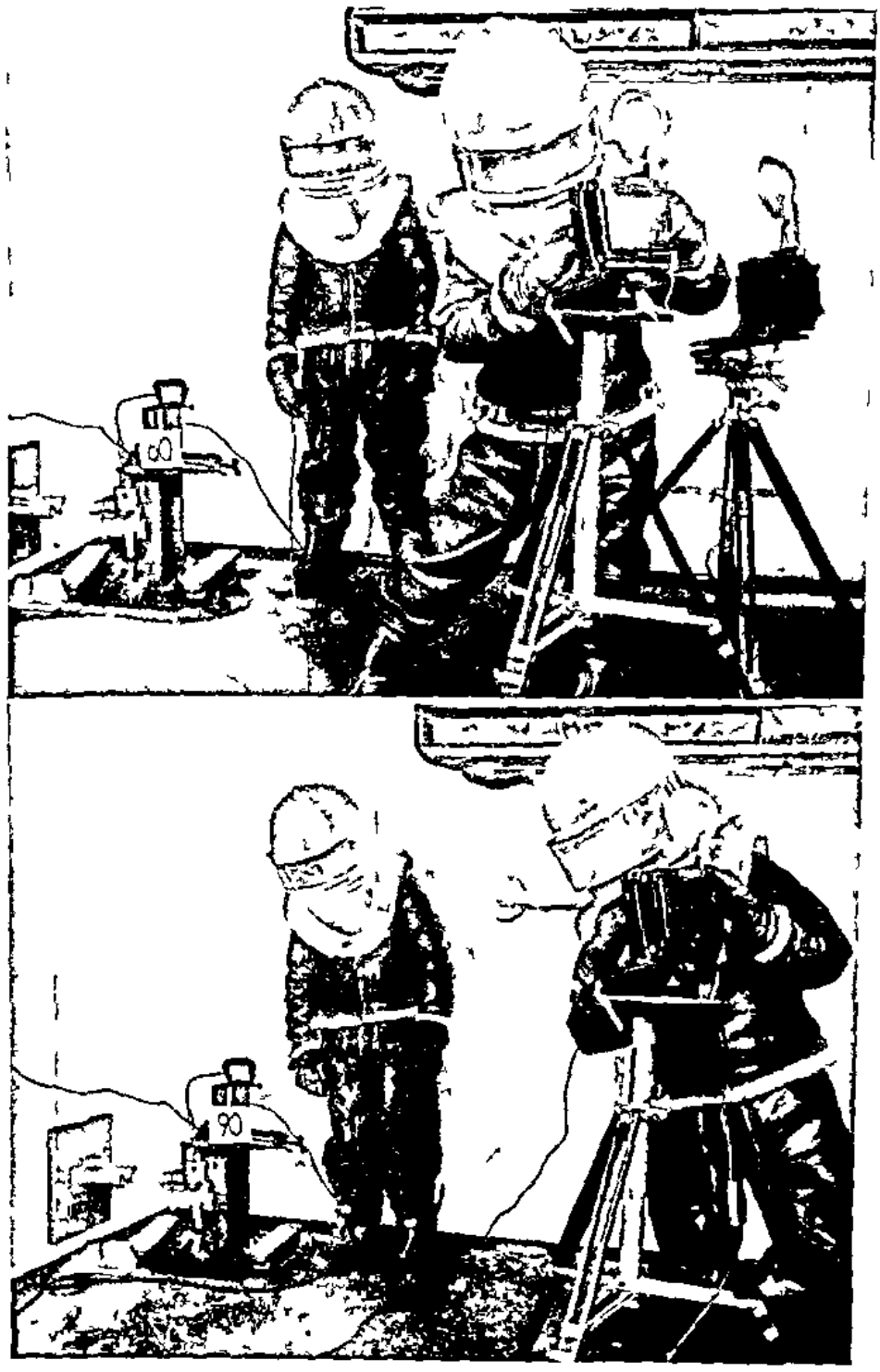
It is a known fact that the standard temperature at 30,000 feet is 67 degrees below zero and the air pressure is close to three and a half pounds per square inch. Think how much colder it is at 35,000 feet. Rubber becomes as brittle as ice, the grease freezes (and you who are mechanical know what this will do to the ball bearings and the greased controls) and the metal in the plane shrinks so that when descending the paint flakes off.

Much of this and many other handicaps encountered at such an altitude have been overcome in the Douglas Laboratory. Test flights are expensive and much of this research work can be done right on the ground.

The men don't approach this ice box clad in the latest California style—no indeed they look like prehistoric animals slowly stalking their prey. Maybe you'll think this is because they have their minds on the Japs and are using the same tactics. But the fact is that the weight of their horse hair and wool suits topped by heavy helmets takes the spring out of their step. These aluminum helmets have non fogging Plexiglass windows and are equipped with a built-in telephone. In order to avoid pneumonia they breathe air that is warmed by their own bodies. This comes through a flexible pipe that extends just under their coats and comes up inside the helmet.

And—they are never permitted to stay inside this Low Temperature Laboratory for more than 20 minutes at a time. One man is never permitted to go in alone and they are constantly observed from the outside through a heavy plate glass window.

It was Lawrence Kronquist, the well known airplane photographer who thought up the value of photographing under such



Testing equipment and photographing at 60 degrees below zero might be termed giving things the "cold shoulder," but these men at Douglas got used to that; they wanted to see what happened at 90 degrees below zero (lower picture)



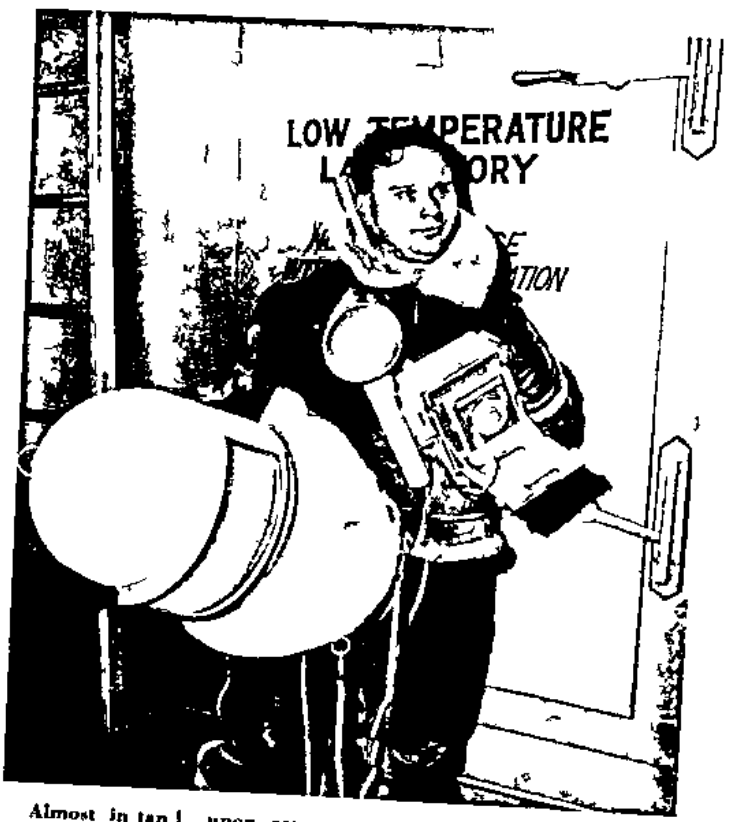
Larry Kronqu st needs help n adjust ng h s hea v helmet as he prepares to enter Low Temperature Lab at Douglas



Com ng out of the super ce box somet mes 90 degrees below zero Fog rises as the heavy door is opened



Plexiglass in helmet steams up at sudden change in tempera ture when coming out so help ng hands are needed



Almost in tan l upon com ng out frost forms on helmet and camera Men are allowed onl twenty minutes inside









Preston Sturges surrounded by various hot jets to be two different persons. Upper: As the writer he sits intently watching a scene of his "Sullivan's Travels," while assuming the director's megaphone and pulls his hat. Stalled Writer Sturges, who is now Director Sturges who slaps the script, sputters and asks: Did you write this insane non-sense? Lower: Sturges the writer hangs his head in shame while Sturges, the director, holds his nose firmly and releases a terrific SHOOEY! Worm. The worm turns. Writer Sturges finally let loose and tells Director Sturges what he thinks of the way the latter directs the former lovely scene.

"Sullivan's Travels," Paramount Production

Stills by Talmage Morrison













John Lloyd Sullivan (Joel McCrea) prominent comedy director decides he wants to make pictures showing terrible conditions and hard times so with the aid of his butler and valet he garbs himself as a tramp and starts out to learn about the sordid side of life. He finally manages to shake reporters and become a real tramp but does not learn about life until he lands in prison and finds this troubled world needs just what he had been giving them as a director of comedies.

at last heeds the advice of a trusty to stop acting up

Down in the negro church in the bayou Sunday night entertainment is afforded and the negroes invite in these lowly despised convicts to enjoy a movie there It's an old picture a silent one and an out and-out slap stick comedy Amazed Sullivan sits there watching these poor negroes and wretched convicts folks with real troubles forgetting everything and roaring with laughter at the farce on the screen Suddenly he too is laughing with them

Sullivan calms down and starts planning a way out of this. For his repeated bad behavior he still is not permitted to write any letters Suddenly comes an idea He confesses to the murder of John L. Sullivan the director *It happens that The Girl* taken to Hollywood after Sullivan's "death sees the murderer's" picture in the paper and goes charging into the front office

Its all over Sullivan is out of prison He and The Girl are going to be married And the studio bigwigs are very happy It will be the greatest tragedy since the Johnstown flood—Sullivan's sacrifices, his courage lengths to which he went

But Sullivan wants to make a comedy there's a lot to be said for making people laugh And he'll give that comedy a foreword "To the memory of those who made us *laugh* the motley mountebank the clowns, the buffoons in all times and all nations, whose efforts lightened our burden a little in this cock-eyed caravan this picture is affectionately dedicated

Government Training Films

Due to many requests we have received for information regarding Government Training Films, what they mean and how they are produced the following text is taken from a bulletin issued by the War Department at Washington

In the summer of 1940 the shortage of qualified Army instructors resulting from the rapid expansion of the Army, made it necessary for the immediate adoption of some additional means for mobilization *training The use of visual aid to* accelerate basic military training introduced into the Army in 1920 when the first training film was produced by the Signal Corps, appeared to be the solution The Chiefs of the Arms and Services were instructed to prepare a list of subjects for production as essential training film As a result, the War Department set up 200 different subjects for priority production

For a number of years, the Chief Signal Officer had in preparation a tentative plan for cooperation between the War Department and the American Motion Picture Industry in the event of an emergency The industry through the Motion Picture Committee Cooperating for National Defense composed of the heads of the leading film companies creative guilds and other motion picture workers immediately expressed a willingness to cooperate The organization specifically charged with the *task of actual production in Hollywood is* the Research Council of the Academy of Motion Picture Arts and Sciences

The chairman of the Research Council is Lieut. Colonel Darryl F Zanuck Signal Corps Reserve executive Vice-President of the Twentieth Century Fox Studios in Hollywood The manager of the Research Council is Captain Gordon Mitchell Signal Corps Reserve

Training films are not created as entertainment They are intended for one purpose only—graphically to present military instruction as it should be presented in a military demonstration or lecture Training material presented upon the screen establishes a standard for the military personnel who view it.

Having never constructed a machine gun emplacement sited his gun and concealed his position a selectee cannot become proficient in these operations simply by viewing a training film on the subject.

However much time and instructional effort may be saved and the soldier's ability to perform these tasks materially hastened by a good training film It enables *him visually to examine correct procedures*, and thus to gain knowledge of the results that are expected of him in the performance of his duty

Another important factor in training films proved not only in this country but abroad is that they not only expedite instruction of soldiers in large numbers but they also assist in standardizing such instruction

The Army of today modern in equipment and in method, is also modern in its efforts to promote the personal well being of its men Subjects such as hygiene *have always been difficult to present* Through the medium of the motion picture they can now become a personalized message to the soldiers In films dealing with military techniques, such as the service of a 60 mm mortar visualization of the subject has vastly expedited the ability of *the soldier to assimilate routine methods*, because he can see projected before his eyes, correct procedure The training film enables the men not only to learn how to operate the weapon but also to know its history to understand its care and to appreciate its tactical employment. Thus, the American soldier is being taught WHY as well as HOW

Through the Research Council and the authority of the Motion Picture Committee Cooperating for National Defense the entire vast production facilities and creative talent of the American film industry have been made available to the War Department.

All of the work in Hollywood in con

(Continued on Page 16)

PRODUCTIONS NOMINATED FOR ACADEMY AWARD

Arthur Edeson chairman of the Academy Cinematographic Award Tellers Committee has announced the following productions nominated for the Academy Award for Achievement in Black and White Cinematography

The Chocolate Soldier Citizen Kane Dr Jekyll and Mr Hyde Here Comes Mr Jordan, Hold Back the Dawn How Green Was My Valley Sergeant York Sundown Sun Valley Serenade That Hamilton Woman

Nominations for the Academy Award for achievement in Color Cinematography

Aloma of the South Seas Billy the Kid Blood and Sand, Blossoms In the Dust Dive Bomber Louisiana Purchase

In accordance with the rules governing these Awards all Directors of Photography will have an opportunity to view the nominated productions during the next four weeks after which the production to receive each of the Awards is chosen by vote of the Directors of Photography group

Meetings to view the nominated productions will be held at Warner Brothers Laboratory Projection Room on Wednesday and Friday evenings commencing January 28

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MOUNTAINEERING FOR DEFENSE

By Chalmer D Sinkey

Amer a battle-cry is reverberating from the highest pinnacles to the farthest seas —and you can take it from the news reel boys that every inch of our soil will be protected —up to the first peak down to the last ditch!

The newsreel boys came to that decision after frantic months of filming defen e pro jects

Even before PEARL HARBOR they had opened their mouths and eyes —and lenses —to take in the spectacle of mass prepara tion expanding production of aircraft — the tingling marching beat of thousands of new soldiers —the thrill of budding patri otism in civilian groups

Through their cameras they had watched America swinging into position to put her shoulder to the collar

As far back as last August —Movietone s editor discovered that a defense movement was under way high up on the glaciers of Mt. Rainier

Picked mountaineers and guides were being trained against the day when the de partment of the Interior might need in structors to help condition alpine troops It all seemed remote and far away then

Mt Rainier jutted her lava scarred sum mit 14 108 feet into a hazy summer sky From a distance she looked like a great dish of ice cream set h gh above all of her surroundings —peaceful —impregnable

Down off her summit, Nisqually Glacier travelled slowly in its sleep

Tourists gazed at its broken serrated lower stretches sometimes they shuddered at the roar of thunderous avalanches of rock and ice

If they chanced to peer through the powerful telescopes that point upward from the Inn —scanning an area some ten thousand feet up on the peak —they saw the rending agony of creat in where this eternal river of ice is born of the mother snowfield

And if they looked even more closely — they saw tiny dark specks negotiating the crumbling crevasses

The specks were mountaineers —the best mountaineers that could be found —and the mi sion of these daring young men was to prepare themselves for America s de fense

One day it might be necessary to take Alpine troops over terrain like this —and these were the boys who would be ready to lead the way

By way of a start they had volunteered to lead Movietone s cameras on an expedi t on to film the project

This particular testing trip was to take up two days of work and we were starting from Paradise Valley in the afternoon — hoping to climb to Camp Muir on the ten thousand foot level —by nightfall



Our guides proceed with care but even so there are times when there is no way around and they must leap across a fissure Note how the ice-axe is poised for a thrust into the ice wall—in case he fails to get across Crampons, strapped to his shoes will help anchor the mounta neer when his foot touches the ridge

Several guides carried camera equip ment, others carried food ropes cramp ons and various climb ng gear

Six mountaineers travelled l ght,—saving their energy for the next day when they were scheduled to train out on the danger ous upper reaches of Nisqually —three thousand feet below the actual summ t of the peak

When evening caught up with us we were well up on the glaciers looking down on a vast panorama of lesser pinnacles

To the southward —Mt Adams Mt St Helens and Mt Hood towered above the layers of landscape like fingers poking out of a ragged glove

The setting sun mingled with a distant forest fire and wrapped them in one last rosy glow Then as the shadows crept over the snowfields —a chilling wind swept

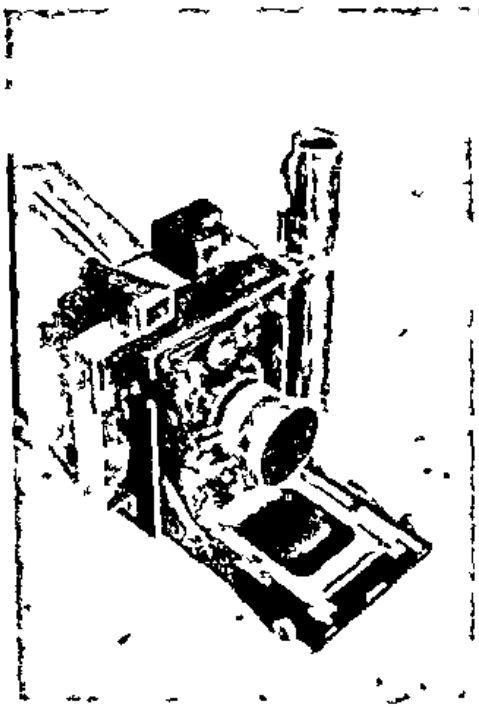
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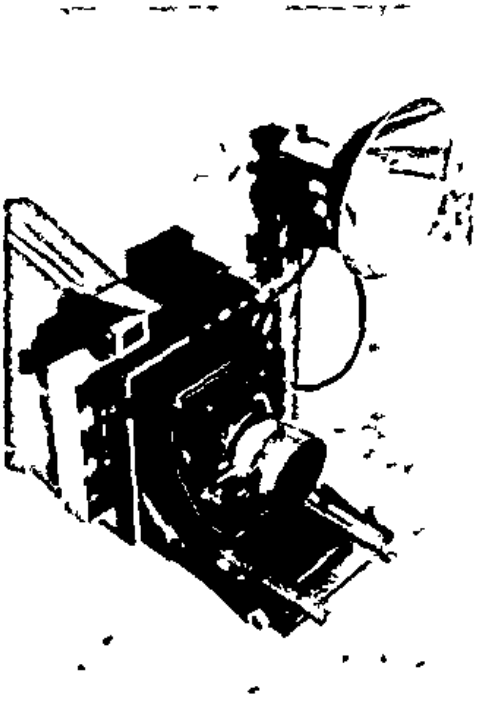
For description of pictures see opposite page

NIGHT FOCUSER

By Earl Theisen of *Look Magazine*







The chief demand of the photographer today is equipment that will facilitate the shooting. Subjects and models are no longer happy with monotonous or tiresome posing.

Modern photographic tools are largely designed to speed up and expedite the details and mechanical operations of the camera—and people just do not like to have their picture taken with the same trials of pulling a tooth.

Magazine or news editors and advertisers on the whole prefer photos taken with that snapshot casualness that gives warm human pictures. For LOOK Magazine we prefer that pictures be story telling that they be taken in action. To do this much equipment has been designed. One such piece of equipment is a light beam device for automatically focusing the camera at night. While the idea is not new it was never reduced to practice until recent years.

In the past couple of years there have been several night focusers put on the market. About four years ago Steve Hansen and I devised a night focuser for the Graphic camera so as to be able to photograph action in low key lighting without asking the subjects to hold still for focusing. We designed the thing for use around night clubs and for movie sets to speed up the focusing to catch the subjects in actual motion.

Our first models utilized were the pencil cell or single flashlight batteries. After making 10 or 12 models using the various types of batteries, it was apparent that more power would be needed so hook ups were made into the three-cell speed flash unit. This made it possible to get a strong enough beam image to make it "bounce out" and overshadowing any other light on the subject. The question arose as to the electrical drain on the three-cell units but it has been found to be negligible. As many as 80 dozen pictures have been taken with the night focuser hook up to the speed flash unit without appreciable power drop. Actually the three-cell units dropped approximately three amperes in that period of time indicating that it was not permissible to use the same batteries for both the speed flash and the night focuser without hazarding synchronization.

From the first experiments were conducted to speed up and increase the illumination of the night focuser. The first model utilized a single double convex lens but the last model uses a two-lens system to improve the beam image. The globes are the carton ribbon type filament specially made by General Electric to give longer life. GE cooperated to give a filament that would project a beam in a plane surface. The front lens of the night focuser folds down so it may be left installed on the camera at all times.

With this optical system using the power from the 3-cell battery unit it is possible to project a beam satisfactorily focusing a distance of 300 yards. The beam is readily visible and may easily be used for focusing at that distance which is well beyond the distance of the satisfactory use of the speed flash.

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Demolishing Huge Set Is Expensive

One of the biggest projects being prepared now at 20th Century Fox is one of complete destruction.

More difficult than the building of a huge set is the razing of one built last Fall in the San Fernando Valley. At a cost of $150,000 Darryl F. Zanuck erected an entire Welsh village of 80 buildings besides putting in a workable colliery and mine shaft, for use only for scenes for How Green Was My Valley.

Now that the work on that set is completed the studio has to meet the terms of the lease on that acreage by tearing down the village and restoring the land to it original condition.

The minimum estimate for this job of destruction and restoration is $25,000. This cost not only includes the job of dismantling but also the filling in of the mine shaft and tunnels.

New Slant on Newsreeler

By Charles Saxton

Charles Saxton whose fine hand has poked its fingers into some of our recent issues now takes up the pen pointed sword of say so in his own facetious right

In this little burnt offering, he brings to light some tattering tidbits anent the news reel cameraman —Editorial note

This is written to prove—or disprove—that, cinematographically, the Fourth Estate has nothing to do with Third Dimension, Second Sight or First Impressions.

I am not a newsreel cameraman but I'm qualified and in a position to speak. I was literarily associated with the intrepid *Norman Alley in the writing of I Witness*. In addition to this I personally know scores of newsreel nomads on both coasts—many of whom are members of Local 659 and in good standing, when they're standing. I could mention names and call them off, but they're too humorous to mention.

These are all fellows who flaunt themselves in the very teeth of death and destruction to get a few precious feet of film for a news clip to be shown at your favorite newsreel house. But I've never met one of these guys who, should you pin him down would not admit that he'd sooner be photographing something like a cheesecake bathing parade at Venice.

I know one phoolish photog who married a sunkissed cutie that he met at one of these leg art clambakes—and he's the one exception to the rule. Were you to get him aside and pin him down, he'd readily admit he'd sooner straddle a big gun at Manila Bay—and take his chance photographing death and destruction.

But that's what comes of being married for a few years—even to a loving cup winner.

It is legend and common gossip that all newspaper reporters are heavy drinkers. But such can not be said of their newsreel brethren—at least not in a sober breath. Their's is a highly specialized work and calls for a clear eye and perfect coordination between mind and body. The newsreel shots must all be as sharp as your Aunt Aggie's tongue—or else. The home office just won't tolerate any hocus focus. Therefore should a worker in the field so much as look at a bottle of spirits frumenti he'd immediately be stood up against the nearest wall and shot—or half shot, anyway. All depends on the liquid content of said bottle.

It is interesting to delve into the history of cinematic graphic gleaning to arrive at what's what.

And that what's what makes a highly entertaining what.

Nowadays the galloping ghosts of the newsreels gallop to the scene of the latest national happening carrying a small Eyemo or maybe a DeVry, a camera that weighs less than a sawed off shotgun and looks strangely like a lady's hair dryer. A fellow can rush in, grab his picture with the agility of one swatting a house fly and get away—all in the twinkling of his good eye.

But in the good old days the boys had to pack around a ponderous paraphernalia that looked like an aircraft carrier. These outfits, which were all box and a yard wide, weighed in the neighborhood of 200 pounds—which is quite a neighborhood. And that weight didn't include the crank handle. Yessir! One's ability at being artistic and quite capable of making a sweet picture didn't mean a thing. The guy who got the job was the one who could lift the apparatus and take it away—like a fireman carrying Kate Smith from a burning building.

I know of a guy who was all set up with one of these two ton outfits and ready to make a picture for posterity. But at lunch time, he called for a corkscrew instead of a knife and fork. Result: Just as he parked himself on a perilous perch and started grinding on the gravy, his unsteady foot slipped—and off into space went cameraman, camera and the cap he had on backwards. He went to a watery grave at the bottom of the Lido Pool at the Los Angeles Ambassador.

There was another chap who drew a weekly salary for years, without bringing in as much as one foot of exposed negative to the boss. *The amazing secret of it all* came to light when it was discovered by an investigating committee that the big box he had been toting around so gingerly was a portable bar on three legs!

Yeah! *The bowels of the big box* contained a liquor stock that would have done proud to the old Swing Club. In there, and on shelves were to be found such trickling items as beer, wine champagne, bourbon, rye, gin scotch, tequilla, bitters, brandy, rum, Kummel bar sugar—and a small brownie.

Now don't get this guy wrong—the brownie wasn't for making still pictures. This brownie was a midget—who was in there for the sole purpose of dispensing the drinks!

What was thought to be the camera lens proved to be an outlet for piping in some fresh air to the bartending midge.

Speaking of schnapps—and why not?—I know of one prehensive lens lentil with such a vermillion schnozzola that he didn't have to use a red light in the darkroom. He was an oiliging fellow, and on rainy days, the boys always shot a close up of him when they wanted unusual pictures of a blazing sunset—with blurred cloud effects.

No two ways about it—the red nosed guy was a Japanese flag with ears. Which was only natural. He got to look that way from Nippin'. But he finally committed hari kari when someone told him he looked like that. Poor fellow—we can't blame him, and may his soul rest in peace.

You see, at heart he was as star spangled as Earl Carroll's new review. He was an All American half whack!

Remember the cookie who invented the rubber lens for shooting around corners? Well, I see where the government has curtailed the further manufacture of his brain child for the duration of the war.

Well, I gotta run along now. I'm going to help a newsreeler locate some booster lights. You see, he's on the trail of an "exclusive" that none of his rivals seem to have thought of.

He tells me his grand unthought of idea is to make movies in the streets of Los Angeles during our next blackout!

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HOLLYWOOD, CALIFORNIA

The Remarkable Andrew Paramount Production













Fundamentally "The Remarkable Andrew" concerns a small-town municipal bookkeeper who is framed by a gang of crooked politicians to cover their own embezzlement of public funds. From the past come the shades of Andrew Jackson, George Washington, Thomas Jefferson, John Marshall, Benjamin Franklin, Jesse James and Private Henry Bartholomew Smith to assist the boy in the routing of the gang of crooks.

Brian Donlevy who has soared to stardom upon the heels of his great performance in Preston Sturges' "The Great McGinty" was chosen to portray the ghost of Andrew Jackson. William Holden, Paramount's ace of the younger male stars was chosen to play the boy and Ellen Drew, Hollywood's typical working girl was chosen to play the role of the boy's sweetheart, a ribbon counter clerk in a depart

Stills by Kenneth Lobben

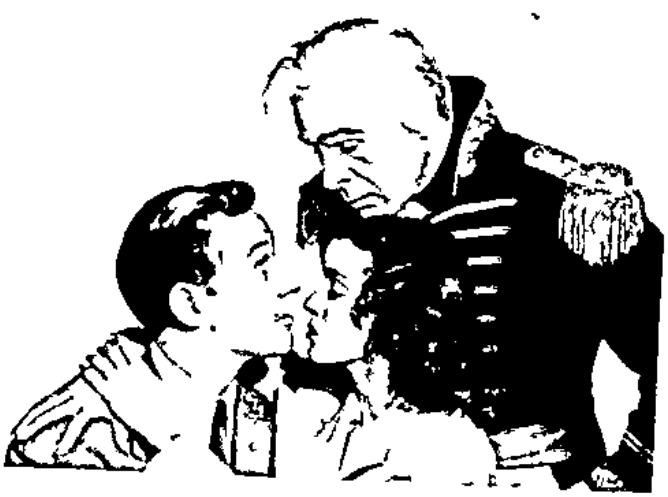












ment store Stuart Heisler best remembered for The Biscuit Eater was chosen to direct the picture

The casting of the shades of the historical figures was done with such care that screen tests in makeup were made before the cast was finally chosen

Studio executives hail the performance of Holden in the role as the greatest of his career and reminiscent of Charles Ray

After an extensive serial inspection of towns in the west Carson City the capital of Nevada was chosen to impersonate the fictitious Colorado town of Shale City and all exterior scenes were filmed there by a company of 250 players and technicians

The appearance of Hollywood in the little desert capital gave the city Reno and surrounding towns a field day Blase divorcees from Reno lanky cowpunchers hard rock miners and Indians from the reservations flocked to the town to witness filming of the scenes Approximately 300 natives of the town were used as extras in the film



"Smilin' Through" *By Herman Fink*

Training films

(Continued from Page 8)

nection with the production of Training Films is being done for the War Department on a non profit basis. No studio is profiting one cent as a result of this program

No studios charging overhead for films produced in their stages All equipment and facilities used in the production of these films are made available without any charge All stage space and studio property used are made available to the War Department without charge Individuals in the industry are contributing and more have offered to contribute their time and talents to assist in the production of Training Films without cost to the Government. The only expenditures involved in the production of these films is money actually paid out for labor film, and other "out-of pocket" expenses.

The films are all produced under the supervision of Signal Corps Officers, stationed at the Research Council as War Department Liasion Officers

For each film, dealing with the problems of the different branches of the Army a technical advisor—an officer of that branch concerned—is assigned to Hollywood to serve at the Research Council during the production of that particular film

In this way the correctness and accuracy of every military feature included in the training films is assured

There are many subjects included in the Army Training Films that contain material which, by War Department order is of a confidential nature As a result, none of the Army Training Films will be exhibited to the general public at any time

SMPE Schedules Spring Convention at Hollywood

Emphasizing the important role played by the motion picture industry in maintaining American morale the Society of Motion Picture Engineers has decided to hold its Spring Convention in May as has been its custom for 25 years. The meeting will be held in Hollywood

William C. Kunzmann Convention Vice-President, revealed the decision to go ahead with the semi annual meeting

"The motion picture industry plays an essential part in upholding the morale of the public in the present crisis" Mr Kunzmann said "SMPE members have many noteworthy technical advances in the motion picture art to report. Accordingly the Convention and Local Arrangement. Committees are proceeding with preparations for the meeting just as planned The convention will be in session five days, starting May 4"



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EASTMAN KODAK COMPANY, Rochester, N Y

'Woman of the Year,' MGM Production

Stills by James Manatt









Top Remember we were go ng to talk ju t the two of us?" says Sam Cra g (Spencer Tracy) to Tess Hard ng (Kather ne Hepburn) At the baseball game to wh ch he has invited Tess, Craig is a ked many quest ons that he can't answer Lower Tess h ds Craig to come out and meet her friends It all ends very happ ly but not with the wedding Amazement is m rrored on the face of Tess Hard ng on her wedd ng n ght NOT to see her bridegroom but instead Dr Lubbock (Ludw g Stossel) pol tical refugee from European upheaval

"Woman of the Year"

"Syncopation" RKO Radio Release Stills by Otto Benninger

Spencer Tracy and Katharine Hepburn in "Woman of the Year." Here is a movie complete with every essential—brilliant stars, a timely exciting modern story, romance comedy sports spectacle direction and production supervision.

It presents Tracy as a tough two fisted sports writer who has no interest in life outside of baseball football and boxing until he meets and feuds with the sophisticated girl who writes the international column on the same paper, played by Miss Hepburn. For Tracy it is a characterization to compare with his Academy Award roles. For Miss Hepburn it is a role the equal of her outstanding performance in "The Philadelphia Story."

Their romance is played against comedy backgrounds. Miss Hepburn has never seen a baseball game until she meets Tracy. Tracy has never traveled with the fast international set until he meets Miss Hepburn. But they have one thing in common—love. There is exceptional depth to the story too in a girl selected as The Woman of the Year who has never learned what it means to be a real woman. It takes a few hard knocks and Tracy to teach her.

Fay Bainter third Academy Award winner in the cast heads the supporting players as Miss Hepburn's aunt who has devoted her life to being a leader of the feminine movement. She discovers almost too late that love sacrificed for a career isn't worth all the honors that can come a woman. Reginald Owen plays a highlight comedy role as Clayton managing editor of the paper who is confused by the antics of his top sports writer and expert on international affairs.

George Stevens who directed Miss Hepburn in one of her most memorable films Alice Adams is the director. Stevens is rated one of Hollywood's most versatile directors being equally at home directing such delicate dramatic themes as "Penny Serenade" and rousing action pictures as Gunga Din. In Woman of the Year he combines both. Joseph Mankiewicz who brought "The Philadelphia Story" to the screen is the producer.

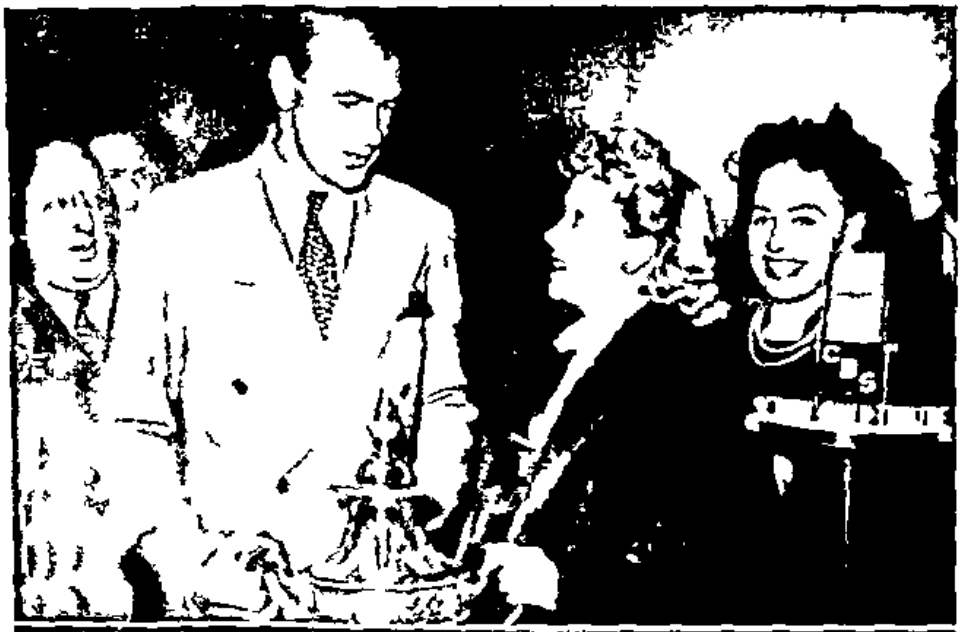
For its sport spectacle the picture includes a championship boxing match at Madison Square Garden a football game at Soldiers Field and an hilarious baseball game with Miss Hepburn asking Tracy dumb questions at the ball park of the Brooklyn Dodgers.



Top: World War Number One hits the headlines. Johnny (Jackie Cooper) holds paper. To the left are Paul (Ted North) and Kit (Bonita Granville).

Lower: Adolphe Menjou and Bonita Granville playing father and daughter roles listen to the latest dance record from their home town New Orleans. Menjou and Miss Granville with Jackie Cooper have the leading roles in this massive history of the birth of modern dance music.

Near the Mike



Gary Cooper 1941 w nner of the Red Book Magazine award is presented w th it by Martha Scott, previous winner at the Screen Guild Gulf Theatre Broadcast Back of the m ke is Paulette Goddard



Instead of the usual party given in previous years, Red Book and Warner Bros wrote checks payable to the Red Cross. Gary Cooper is present ng the check to Joan Leslie Looking on with approval are Walter Brennan Edward Arnold and Ralph Morgan.



Is Charl e McCarth trying to "horn n" on Jimmie Stewart, or does he think J mm e will know of some new way to get Bergen to increase h s allowance? Can't be that, Bergen looks too happy Maybe Charl e *is just promoting another of h s big* deals

With Hyman Fink

Staff photographer
Photoplay Movie Mirror
and *Radio Mirror*



Abbott and Costello auctioneers raising funds for "Buy a Bomber at Charlie Foy's Supper Club After selling gifts donated at fabulous prices off came the neckties, then Costello's shoes, which brought $30 Costello got cold feet and threw $35 in the fund to get 'em back



Mr and Mrs Bob Hope Bob was master of ceremonies on Buy a Bomber night Can't see whether or not Bob has lost his shoes He and the Missus look as if they really like each other Maybe Mrs Hope is even enthusiastic about Bob's radio programs WE ARE!



Mr and Mrs Harold Peary You don't know 'em? How about that guy on the radio who talks himself into more tangles than anyone you ever heard always plays pranks on the wrong person and when he calls on his good friends for help they make matters worse? The Great Gildersleeve of course!

negative We are ready now to make the composite print The matte is placed over the plate negative the start mark punched on the negative and the scene printed In this process the printing light goes through the clear portions of the matte—which was white background in the action—while the black figures hold back the printing light and prevent printing where the characters are The raw positive stock is then rewound to the punch mark the *action negative* is then used alone the punch marks are lined up and the scene printed for the action in the usual manner The black negative corresponding to the white background in the scene will hold back the light from the printer and prevent it from striking the parts of the picture where the background has already been printed upon it The result is a composite of the background scene with the action appearing to be taking place where the background was photographed

Lycoming Awards Prize

For his picture entitled Chute Test' Albert V Baez of Wagner College, Staten Island N Y was awarded the grand prize of $25 00 in "The Lycoming Star' Snapshot Contest a feature conducted throughout 1941 by this monthly publication of the Lycoming Division of The Aviation Corporation Williamsport Pennsylvania

The contest was open to all readers of The Lycoming Star which is circulated on airports and in flight training schools throughout the United States

Each month a prize winning picture was selected from entries received the previous month and the photographer was presented with $5 00 for his snapshot Every entrant in the contest throughout the year received a gold plated Lycoming wing lapel emblem The $25 00 grand prize was awarded for the snapshot judged best among the previous monthly prize winers

Preprint Negative Kit

To assist those who want to make better prints and for those who like to experiment with effects the Stellar Pre Print Negative Kit ($1 00 postpaid) contains 16 carefully processed 35mm negatives and a complete 24 page instruction course

The sixteen negatives are grouped in sets of four each of similar subject The first group consists of four texture screens including monks-cloth veiling pebbleboard and canvas Since the PrePrint negatives are used in an enlarger it is possible to combine a screen with your favorite negative regardless of its size The combining of the PrePrint negative with your own negative is accomplished by a simple double exposure process with your enlarger and printing paper

The second group of PrePrint negatives consists of four carefully designed foregrounds including trees, sailboat, and two windows These foregrounds allow you to frame or add character to an otherwise dull picture

The third group of four negatives contains cloud formations and sky backgrounds One of the clouds is just a wisp of white against a dark sky to add a general feeling of naturalness to landscape negatives Another cloud formation is a dramatic black and white, rendered more pronounced by infra red film on the original exposure By using only parts of cloud formations it is possible to print hundreds of pictures without repeating the same exact formation

The last of the four negative groups consists of beautiful art borders with which you may frame your favorite print by a simple double exposure process

The instruction course covers the use of all PrePrints and gives many illustrations and examples of the PrePrint technique It also contains many hints and dodges to help you obtain better and more dramatic prints from your negatives

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Adapters for Leica Lenses

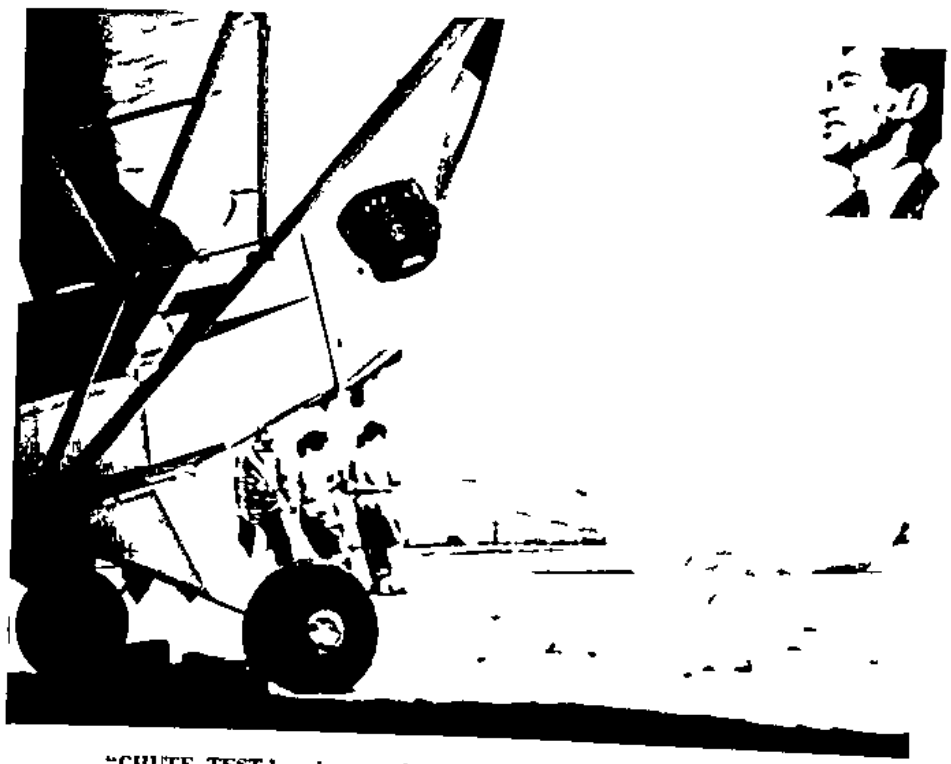
Through the introduction of special Cine Adapters by E Leitz Inc it is now possible to use Leica Lenses with amateur motion picture cameras Two types of such Adapters are available One permits the use of Leica Lenses with 16mm cameras having a type C lens mount The second type of Adapter is made especially for use with 16mm and 8mm Magazine Cine Kodak cameras This latter type of Adapter is supplied with its own focusing mount which is calibrated from 1 ft 4 in to infinity Whereas the type C Cine Adapter can be used with all Leica Lenses the special Adapter for the Magazine Cine Kodak can be used only with 50mm Leica Lenses having collapsible mounts such as the Elmar, Hektor Summar, and Summitar 50 mm Lenses

Through the use of these Cine Adapters Leica owners can employ their highly corrected Leica Lenses as relatively long focal length lenses for their cine cameras Further information on these Adapters can be obtained by writing to E Leitz, Inc 730 Fifth Ave New York, N Y

Agfa Ansco Announces a Change in Personnel

The Board of Directors of General Aniline & Film Corporation has accepted the resignation of Mr Ernst Schwarz as director and vice president of General Aniline & Film Corporation and as general manager of the Agfa Ansco Division

At the same time President John E Mack announced the appointment of Mr Leopold Eckler, assistant vice president of General Aniline & Film Corporation as acting general manager of the Agfa Ansco Division Mr Eckler has been for many years director of production for the Agfa Ansco Division



"CHUTE TEST," prize winning photograph in *The Lycoming Star*, and the photographer Albert V Baez

TRADEWINDS

New Lens Focuses Automatically

Although the living eye with its elastic lens automatically focuses objects at varying distances, optical engineers have looked askance at many ingenious proposals to accomplish this purpose in a photographic lens. But a four element motion picture lens has now been designed by Bausch & Lomb in which one double-concave element is electronically oscillated on its axis by means of a special cell mounting developed by P. Stanley Smith, a New York radio engineer.

The new lens is confined to a distance of three-tenths of a mill meter in its axis movement, but the oscillations are at the rate of 7,200 times per minute, thus continuously altering the focus so that all objects are uniformly in register from four feet to infinity. Although all objects are slightly softer in focus than with lenses of a fixed focal length, many photographers regard this as an improvement.

Smith, following the work of Dr. Ludwig Dietzsch, an Austrian born engineer who patented a mechanical method for vibrating a lens element, designed an electronic method of achieving this purpose and has successfully incorporated the lens in a motion picture camera which it is believed will offer greater flexibility in motion picture photography and direction.

At present action must be kept mobile within the set focus of the camera. Actors must work within a chalk line necessitated by the focal range of the camera. Lighting must be rearranged for each new focus, cameras reset and distances taped.

The new electroplane camera with a lens which keeps all moving objects in perpetual focus, holds the promise of a solution to one of the chief limitations in motion picture photography.

Bausch & Lomb engineers stated emphatically that the new oscillating lens could not be incorporated in hand cameras.



Wabash Blackout Lamp

Wabash Designs Black-out Bulb

Designed for blackout lighting in air raids, the new Wabash Blackout bulb just announced by the Wabash Appliance Corporation, Brooklyn, N. Y., provides downlighting in a soft beam of blue light that is safe for indoor visibility during blackouts. The bulb is lined inside with a pure silver reflector lining that hides all filament glare and projects the light downward. Light leaks are prevented by a black silicate coating that covers the bulb up to the extreme lighting and which is a deep blue. The new bulb consumes 25 watts and will list at 45c.

Carrying Case Holds Leica Attachments

Leica owners who employ the Sliding Focusing Copying Attachment for close-up *and copy work will be pleased to learn that* there is now available a special compact Carrying Case to hold this attachment plus other accessories. This eliminates the problem of how to carry this equipment, especially when it is necessary to make close-up photographs in the field.

This new Carrying Case accommodates the Sliding Focusing Copying Attachment, six Extension Tubes, a Focusing Shade, a 5-x Magnifier and a Leica Camera with a 50mm or 90mm lens attached.

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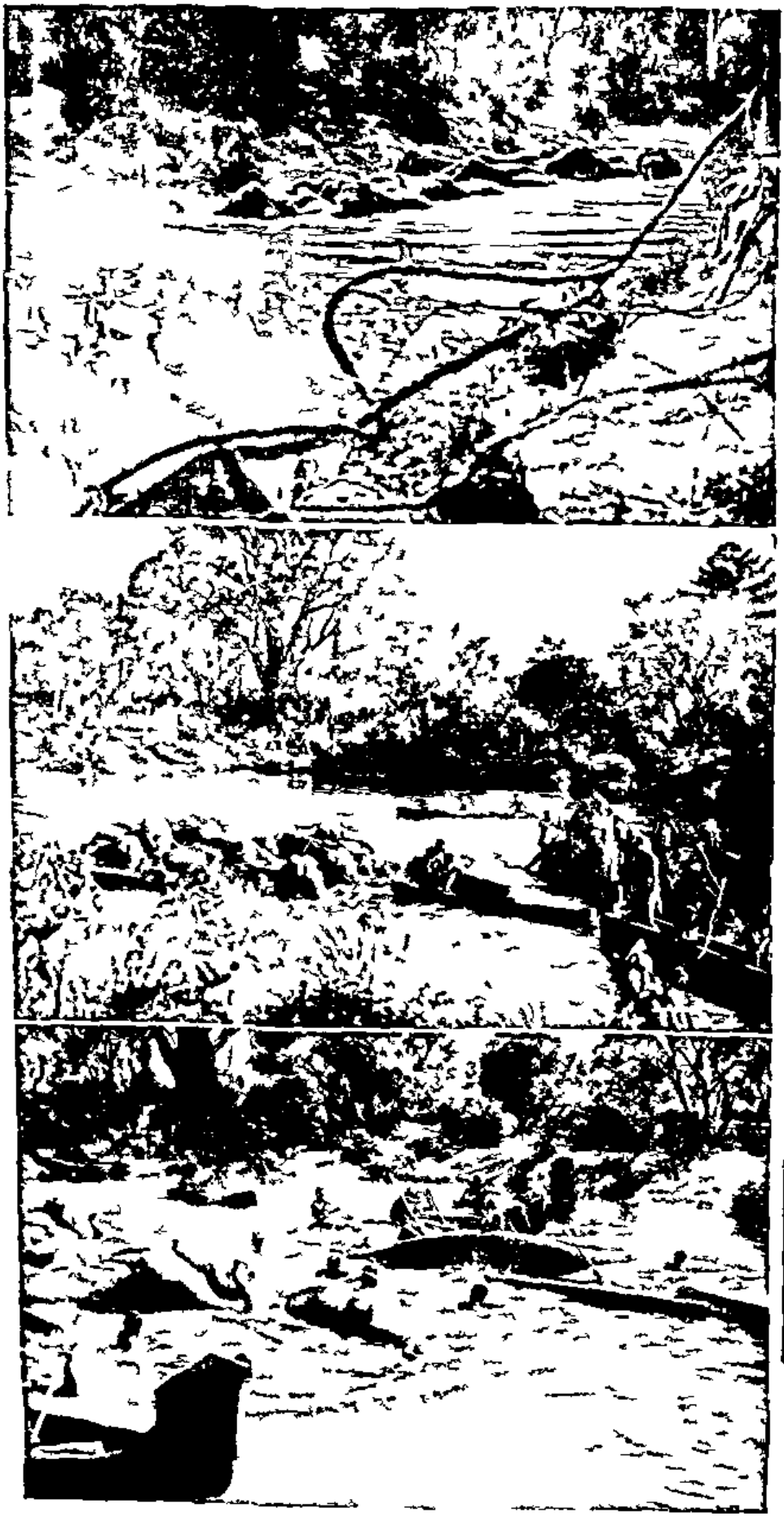
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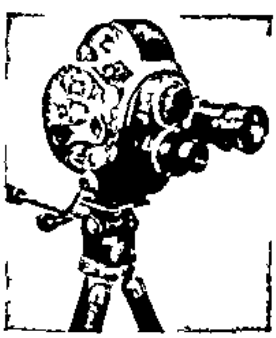


THE fact that Eyemo Cameras are the choice of most newsreel cameramen is proof enough of their merit for *any* 35mm job

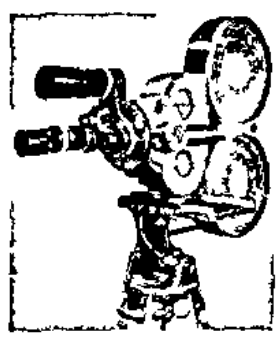
For to be preferred in the news field, Eyemos *must* perform unfailingly, in heat or cold They *must* get the picture, and get it well, whether photographic conditions are good or bad They *must* be versatile for there s no limit to the variety of shots the newsreel man must make And they *must* be easy to carry and quick to swing into action, particularly to get the kind of shots news reel editors want today

Eyemos are now sold only direct from Bell & Howell to you So when you are considering a new Eyemo or want to increase the versatility of your present Eyemo, write or visit the nearest B&H office Bell & Howell Company, Chicago New York Hollywood, Washington D C, London *Est 1907*

REY SCOTT, the cameraman and correspondent whose understanding of China and sympathy for its people are reflected in the motion p cture *KUKAN* is a veteran at his profession having worked with his Eyemo Cameras over much of the world He is seen here with an offset turret model which is temporarily stripped of extra lenses for compactness



EYEMO MODELS L and M have the compact type of three lens turret Viewf nder is matched to 6 lens focal leng hs by turn ng a drum shows "sound field so ma ch camera s sound aperture pla e Oper s ng speeds Model L—4 to 32 frames per second Model M—8 to 48



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January 12, 1942



F V (Freddie) Anderson writes from Pearl Harbor "Arrived at Pearl Harbor the day before Christmas and needless to say spent a very quiet holiday Beer and grog are no more so to most of us it was just another day We were stationed at Fort Island, which is situated in the middle of the Harbor The dinner which was a knockout was our only lead to the fact that it was a holiday for we had no tree or trimmings which usually add to the spirit

All mail is censored which is a good thing so if my letter isn't as interesting as I would like to make it I know you'll understand I am now stationed at Kaneohe Naval Air Station It is about thirty miles from Honolulu and on the other side of the Island It is a fairly new base barracks equipment all up-to-date and as for the personnel it is hard to beat Everyone is helpful friendly and willing to assist

We are allowed liberty one day a week from 8 a m to 5 p m but as the bus service isn't any too good I spend my time here at the base swimming writing letters and reading We black out at sundown so there is nothing exciting to do except sit outside the barracks throwing the bull

Give my best to any of my friends you see I would like to write more often but it is like pulling teeth I wish you'd be so kind as to send me THE INTERNATIONAL PHOTOGRAPHER I'd appreciate it They will catch up with me in time and I'll be looking forward to receiving them

"Thanks for everything—and the best of the bestest. My mailing address is F V Anderson Naval Air Station c/o Photo Lab Kaneohe T H"

HOW ABOUT DROPPING A FEW LINES TO FRED AND SOME OF THE OTHER BROTHERS IN SERVICE?

Mr Herbert Aller
Local 659 IATSE
(International Photographer)
6461 Sunset Boulevard
Hollywood California

Dear Mr Aller

As 1942 begins we are happy to advise the members of your organization that the building of the Motion Picture Country House at Woodland Hills is progressing ahead of schedule

The Relief Fund has been fortunate in purchasing nearly all the materials and supplies for the House *before* the recent price rise and shortages Foundations for most of the buildings are all set and structures are going up rapidly

The grounds are now open to members of the industry and each and every member of your organization is cordially invited to visit the Country House and personally inspect the industry's own project while it is being built

Arrangements have been made for individuals or groups to record their visit by signing the guest book and to be guided around the grounds whenever they come out.

The site is on Ventura Boulevard just this side of Calabasas where a large display sign at Mulholland marks the driveway in

At this time the Fund wishes to thank all your members for their continued interest their contributions, and their talents which are making the Country House a reality

It is your House built by you for those who served the industry Visit it while it's building!

RALPH MORGAN
Chairman Executive Committee
Motion Picture Relief Fund Inc

Rella's column They Say does not appear this month but will be back in the March issue

A short article on page 27 January issue "Film Making for the Army" under the by line Kenneth Macgowan should also have been credited to "Documentary Film News"

F D R, Churchill Aid Film Dialogue, Says Movie Scribe

President Roosevelt and Prime Minister Churchill have done more to change the speech habits of the people than any other one influence of our time if not throughout history

It may seem a far cry between the pronouncement of the two statesmen and the screen dialogue of a couple of muddy sourdoughs bickering over a dance hall babe in the gold rush days of the Yukon but the one directly guides the other

This is the word of Lawrence Hazard one of the screen's highest paid scriveners He says

"Roosevelt and Churchill have taught the people to expect simple direct speech To the point terse No gingerbread

"In my job of writing a script from 'The Spoilers' my he-men would be laughted right off the screen if they used the hearts and flowers words that Rex Beach put into their mouths That's no reflection on Rex he wrote a great story But he'd have to handle it differently today Here is a typical passage from the book

"I know the wild rage of desperation I know the exultation of victory I know what hate and fear are now You told me once that the wilderness had made you a savage and I laughed at it just as I did when you said that my contact with big things would teach me the truth that we're all alike and that those motives are in us all I see now that you were right and I was very simple I learned a great deal last night"

In Universal's 1942 version we would simply have Marlene Dietrich say to Randy Scott or John Wayne I see what you mean kid"

"The public simply won't stand for oratory any more" went on Hazard "They don't want words talk conversation, verbal embroidery They're too realistic down-to-earth They want action And Roosevelt and Churchill are the fellows who started it"

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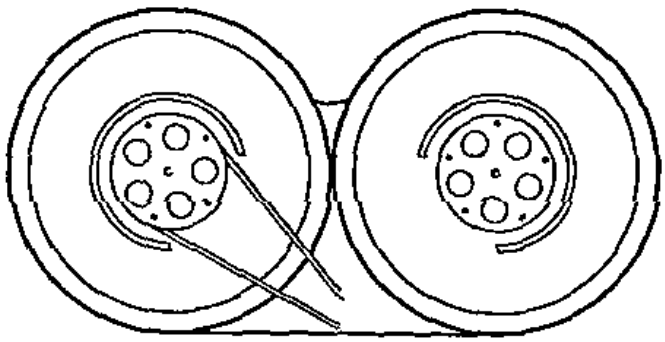
MARCH, 1942

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LORRAINE AND ROCNAN DANCE

By MALCOLM BULL



It's the negative that counts The qualities that make for outstanding cinematography have their inception in the negative From there on it is a matter of "translation" The wide latitude, uniformity and capacity for registering shadow detail of Du Pont Negatives are your assurance of a noteworthy beginning Whatever the subject, whatever the conditions, DuPont's three Superior Panchromatic emulsions offer the combination of optimum qualities that produces results — superior cinematography

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dual roles in pictures

By Howard A Anderson



(A) (B) (C)

(A) shows the star while the mask obliterates the assist ng double (B) shows the posit ons reversed with the mask st ll covering the new position of the double (C) shows the comb nation of both takes using only those portions occupied by the star

Have you ever wished tl at you might be one of twin brothers or twin sisters? Have you ever fancied the idea of being able to d vide yourself?—see yourself hear your self talk to you (or you talk to yourself?—wl ch is it)? Never mind tl is sort of speculation easily may develop a 'vicious circle Nevertheless such speculations among picture fans l ave been suggested by these so-called dual roles in p ctures and evidenced in the many questions as to ho v these clever effects are achieved In answer to these questions we can do no better than to call upon Howard A Ander son the man respons ble for the success ful effects attained in The Man in the Iron Mask and the more recent The Cor sican Brothers to explain the modus oper andi

The ease and accuracy with which tl e slap-in the face and the death scene in The Corsican Brothers were portrayed are significant tribute to a mai who has done the seemingly impossible on celluloid

(Editorial Note)

Perhaps the easiest way to understand these dual effects is to tell of the earlier methods and compare them with the mod ern technique

The early methods were taxing on the mental faculties and nerve wracking The art of making duplicate negatives was poorly developed the dupes being grainy and of poor quality consequently all such effects had to be secured on the initial original negative Each time the film was run through the camera meant just that many chances for failure or accident

The operation for dual roles

The set was carefully designed and a place selected with equal care for he line of demarcation An opaque mask (or matte) was then placed in front of the lens with the edge of the mask coincident with the imaginary l ne dividing the set

The scene was then carefully rehearsed with the star occupying the part of the set not covered by the ma k Every spot along the entire strip of film was recorded by means of the footage counter or by count ing the turns of the crank, after having marked the aperture (or frame) at the start of the scene

A double played tl e responding part, occupying the side of the set hidden by the mask which protected that part of the film from exposure and preserving that space for the subsequent exposure

The film was then rewound at the ori ginal mark on the aperture and with the counter at zero as at the start or the crank handle at the downward position

The pos tion of the mask was then re versed as were the positions of the princi pal and his double after such necessary changes in costume or makeup were made

The scene was again rehearsed each actor now assuming the other s role They were assisted by an assistant director who cued them by the frame counter

Now when the negative was developed both sides of the film having been identi cally lighted and exposed and the mask having been skillfully set the picture showed no signs of the split and was as one exposure

Thus we had two separate series of action by a principal and his double ex posed alternately on a single strip of film having obliterated the double in each take by the relative positions of the mask

In this method where the single nega tive was made at the time on the set no one was able to tell whether or not a matte line would be visible until after the devel opment of the negative To everyone s sor row this was frequently the case and a whole day s shooting would be lost Natur ally this technique becomes so expensive coupled with high salaried actors and pres ent day shooting schedules as to become next to impossible As an interesting com parison in "The Corsican Brothers thirty three shots were made in just the ordinary shooting time without the necessity of a single retake

Now the modern developments have greatly simplified some features of the process but the rigid requirements of the sound department have equally compli cated other features We now have the op tical printer and the refined methods and materials for making dupes but we need the help of the numerical cues called out aloud to aid the actors This call ng of numbers would also record and confuse the dialogue and also the camera is now



(A) (B) (C)

run by the synchronous or interlocked motors of the sound apparatus

The modern method, while identical in principle provides for the exposing of two negatives the part with the double being eliminated by masking in the optical printer instead of the camera and the two parts showing the principal successively exposed onto a dupe negative stock The optical printer provides for a high degree of precision so as to show no line of demarcation

Now here is the interesting part the dialogue is recorded during the first exposure and the same time a wax playback is made This playback performs the same office as was previously provided by the count method, and furnishes faultless cues for the action because they are made synchronously with each exposure

And further, as the double may be eliminated by the mask in the printer, so may both *sound records of the principal* be re-recorded on the single strip of sound track, eliminating the cuing dialogue of the double

Apart from the interesting technical features, that of the artistic treatment is of the utmost importance

Many such pictures have failed because the assisting double has been poorly directed—the principal appeared not to be speaking to looking at or otherwise reacting to the proper twin

The success of "The Corsican Brothers" was due to clever collaboration between the writer of this article who was in charge of these effects, the director and Mr Fairbanks, at all times his actions and reactions were beautifully timed and the results were convincing

The modern method provides many interesting embellishments, such as, panoramic shots where the principal is followed across the room where he may appear in a doorway, or other likely place again, by reshooting the required portion from the static position and combining them in the optical printer

The modern method provides many other advantages It is possible even to vary the position of the dividing line in a continuous scene, thus permitting the actors to move about the set This changing of the line suggests the same principle involved in the so-called wipes

Further, in many shots two cameras, a closeup and a medium shot camera were employed for the same scene photographing at the same time, thus giving the cutter extreme freedom in editing the film

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'Yankee Doodle Dandy", Warner Bros Production

By Bert 'Buddy" Longworth



Grand Old Flag Number from the picture starring James Cagney with Joan Leslie Walter Huston Rosemary De Camp Jean Cagney and others Leroy La Prinz directed the dance numbers and Mike Curtiz directed the picture

The camera crew included James Wong Howe and Ernest Haller the latter on the dance numbers as directors of photography George Nogle second cameraman S Larson assistant W "Indy" Anderson second cameraman William Reinhold assistant Bert Six and Jack Wood still cameramen



Last year s winner George Barnes presenting award to this year s winner, Arth r M ller for best black and wh te cinematography

ACADEMY AWARD WINNERS

With over 1400 persons present the fourteenth annual awards dinner of the Academy of Motion Picture Arts and Sci ences got under way on the evening of Fel ruary 26

The shadow of the war seemed to cast a dimness over the early festivities of the evening but this disappeared when the orchestra began playing song numbers from productions that have become fami liar during the year Dr Hu Shih was received with cheers and Willkie s patriotic speech was punctuated with applause

Most of the women wore informal eve ning gowns some even wore hats an almo t unheard of thing at previous Acad emy Banquets. The men wore l us ness suits This lack of formal attire intensi fied the business l ke air of the functi n

Academy representatives stated there were more stars present than had attended any previous Banquet in the past

"How Green Was My Valley" Twen tieth Century Fox Production was the out standing picture in more ways than one

Award winners for the best perform ances were—Actor Gary Cooper in Warner Bros Sergeant York Actress Joan Fon taine in RKO s 'Suspicion Supporting Actor Donald Crisp in "How Green Was My Valley Supporting Actress Mary Astor in Warner Bros 'The Great Lie"

Crisp has the further distinction of be ng the first actor to be garbed in the uniform of a captain for the Academy function

For best direction John Ford in "How Green Was My Valley"

Best original screenplay Herman J Mankiewicz and Orson Welles for "Citi zen Kane"

Best cinematography (black and white) Arthur Miller for How Green Was My Valley"

Color Ernest Palmer and Ray Rennahan for "Blood and Sand Twentieth Century Fox

Special effects Farciot Edouart and Gor don Jennings for photography and Louis Mesenkop for sound in I Wanted Wings" Paramount

Special awards went to Rev Scott for his extraordinary achievement in produc ing *AuKan* the film record of China s struggle including its photography with a 16 mm camera under the most d fficult and dangerous conditions British Ministry of Information "for its vivid and dramatic presentation of the heroi m of the R A F in the documentary film *Target for To night* Walt Disney William Garity Joh n A Hawkins and RCA for contributions in sound in "Fantasia" RCA for the M 3042 Una Directional Microp one and Eepa for the Precision Sphere Densito meter

often the subject was pitifully mutilated by the special intelligence officer who first viewed the negative It was heartbreaking at times to accept the ruthless massacre of war scenes that no longer held military interest to the enemy We strove to crush decisions and often did so, but this aroused enmity and left an open wound with the censor of the intelligence service who naturally did not enjoy having outsiders disagree with him

When Dunkirk fell the cameramen supplied most dramatic shots and often the censor ripped out the heart of the story simply by hacking cuts here and there There was neither rhyme nor sense to his line of thought We received the film when news came through that Dunkirk had been evacuated Nevertheless, the censor, to fulfill his office, insisted that we could not use the name Dunkirk This was too much, as the London illustrated papers were on sale in Paris with photographs supplied from British sources A second censor, with imagination who handled the expedition of our material said, 'Enclose a copy of the English paper with your film and do not mention Dunkirk and you will have complied with regulations'

The coverage we had on the aerial bombardment of Paris was another tragedy The French censors in the evacuation of Paris, abandoned their film files and in a fortnight the German cinema service released the captured scenes as a trophy of success

At Tour, on June 14 during an air attack I met our old censor acquaintance I hailed him with the wise-crack "Although the service has dissolved you are working with a phantom army The government has fled You had better toss your censor stamps into the river and bolt toward Toulouse for there are bound to be two zones It has been people like yourself who have been the leading Fifth Columnists of the Nazi legions for no excuse other than the lack of scope in vision and not knowing your work"

The debacle was under way for the Spanish border I held a permanent border pass for Spain—and these passes were few in number Not wishing to encounter further hazard I moved off on a small farm road and awaited the end of the bombardment and then the passing of the vanguards of the German Army The following day as a lone passenger I walked into Tour inquired for the German headquarters and asked for an "ausweis to return to Paris Being the first civilian to appear the audacity of the gesture was accepted Admittedly I spoke the language and the Germans thought I was an Alcasian

Our spare material was stored in a chateau of the French cinema service and with the pass I carried I had no difficulty in recovering American property At this time there was no open enmity toward Americans. Aside from this I had the good luck not to meet any members of the ubiquitous Gestapo I had encountered a fighting command unit Needless to say I recovered a supply of aviation gasoline that had been given to me by the Poles before they flew to England In Paris I hid my car until by devious ways I secured a diplomatic ausweis for it which eventually I smuggled across the free zone by borrowing plates that were valid for the German control

The Germans have magnificent film coverage of their war operations but insofar as an alien is concerned the only permit extended was an ausweis to remain fixed if you were on their blacklist and definitely I was not a favorite with the Gestapo

From France I traveled to Spain which has changed since the close of the Civil War Portugal seemed the last and only spot on Europe with bright lights

The American in Europe as in Asia, has been taking a severe beating in business Our embassy staffs have been a cult apart and not very helpful However, individually some of the secretaries are excellent men But what may be expected when embassies functioned with a calendar of 1918 and an appeasement complex?



HE FLOATS THROUGH THE AIR WITH THE GREATEST OF EASE, or at least that's the way it seems, when young Ray McDonald takes time out between MGM's "Born to Sing" to try a few leaps over the heads of the lovely chorines Still by Clifton Kling with Speed Graphic 780th of a second

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AERIAL GUN CAMERA

Reprinted from
Air Forces News Letter

overrun device which keeps the camera going after the pilot ceases firing for a predetermined time to record what happens after he ceases to fire

May Be Used In Combat

Earlier gun cameras were mounted on machine gun mounts necessitating removal of part of the armament but today's cameras are fixed behind the gunsights so that the plane may carry its full complement of guns in addition to its recording device By this means the camera may be carried into actual combat and works simultaneously with the guns to provide a record of the combat Here again the overrun device is an advantage for the pilot may follow an enemy plane down to its crash after it goes out of control and the camera will continue taking pictures of it, after he has ceased firing his guns

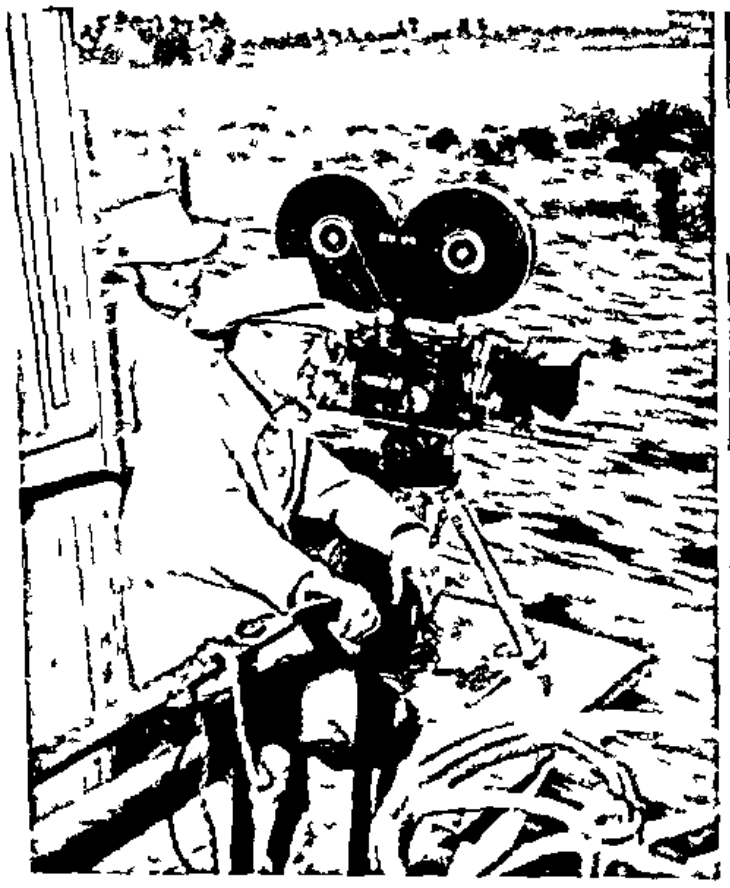
The new Air Corps GSAP camera is electrically driven equipped with a 50 foot film magazine using standard black-and white 16 mm motion picture film The pilot may vary the speed of the camera from 16 to 64 frames a second by a reset knob The machine compensates for atmospheric conditions by aperture controls for bright hazy and dull weather which are accessible in flight But the film latitude is sufficient for the camera to produce satisfactory pictures if the setting is within the equivalent of a stop and a half of the proper setting Like most aerial cameras, the focus is at infinity and the camera is equipped with a footage indicator

Lens May Be Heated

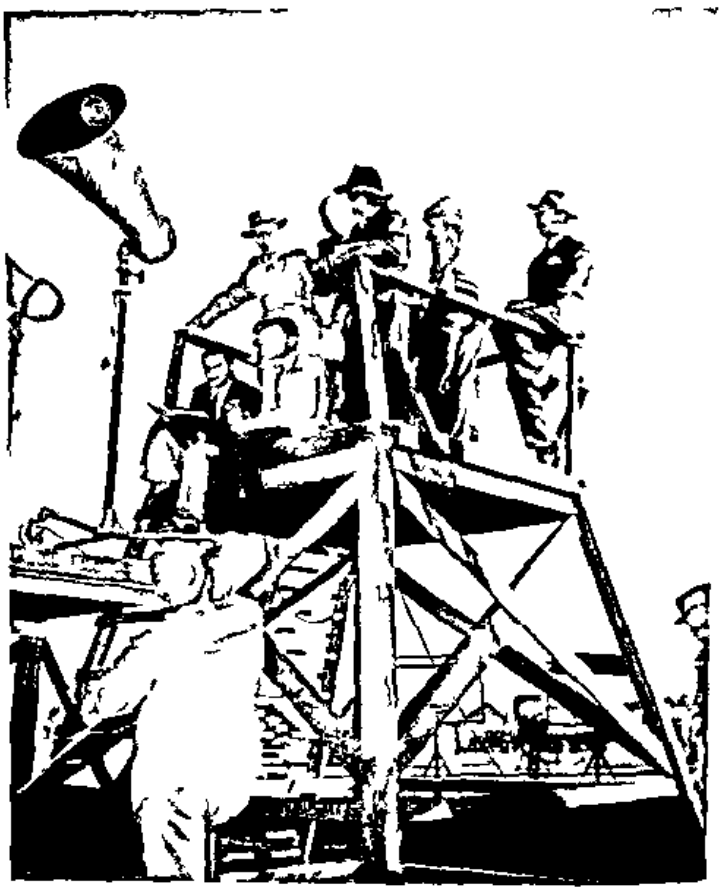
The device is so designed that the optical system showing the gunsight in each frame

(Continued on Page 24)

Crews at Work



Operative cameraman Herb Kirkpatrick left and cameraman Jack Marta on the back of a fast moving train during shooting on Gene Autry's latest picture for Republic "Cowboy Serenade" Still by Bill Thomas



Left to right (seated) Dialogue director Steve Auer, assistant director Phil Ford Standing back Director John Auer Script Clerk Ellen Hansen Operative Cameraman Dave Smith and Cameraman John Alton. From Republic picture "Pardon My Stripes" Still by Joe Walters

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CANTEEN-ING WITH HYMAN FINK



Carmel Meyers, Mary Living tone Mary Pickford and Anita Louise on duty at American Canteen Service, Fort McArthur These women among hundreds of others, have volunteered their services and have regular hours of duty, Soldiers cannot leave the Fort but when off duty welcome the chance to play cards, write letters, relax or be served doughnuts and coffee at the canteen at all times



Edward G. Robinson at the open ng of the United Service Organization another organization to which women have volunteered their serv ices. No longer need soldiers off duty walk the streets or sit in the park for at the U.S O in the center of Hollywood they may drop in to swap yarns, catch up on their correspondence and be served with cof fee sandwiches and doughnuts



Another scene at American Canteen Service Fort McArthur with Gary Cooper and Anita Louise doing the "waiting" Looks like Anita is having as much fun as these sold ei- hove.

Opening of Army Canteen Ser ice at Fort McArtl ur









I s a plea ure o be a sold er when Ja k B nn Cha les Bo er Claud e Colber Ga y Cooper Carmel Me e s and L. B Ma er d h ou he food









STRUTTIN HUTTON—That s Be t Hu ton from Broadway s "Panama Ha t e" Betty does a l tle number about how Arthur Murray taught her to dance and gi es a neat demon tration of how she sings a song She s really a hoofer as well as a s nger and ends her number by saying "I w h I was ba k hopp n ears"

"True to the Army," Paramount Production

Stills by Malcolm Bullock









Machine gun (off scene) paces Ann Miller for an 810 taps-to the-minute dance routine which breaks all exist ng worl l speed records. She's away; toes start their lightning pace Now the l allet skirt swirls in the breeze The take-off taps were never like this before Ann reaches ceiling of endeavors a record!

"THE MAGNIFICENT AMBERSONS"

Stills by Hal McAlpin





Producer, Director and Author of the Screenplay, "The Magnificent Ambersons"
But—Orson Welles does not appear in the film At the left he shuffles a pack of cards between scenes and at the right he is seated in the 1900 model automobile used in the production WHAT! NO TIRES"

To Orson Welles a winter landscape in the movies isn't a winter landscape unless an actor's breath steams on the frosty air Otherwise to him it's phoney

All the wizardry of technicians have never been able to devise a way of making the breath steam unless it meets freezing temperatures coming out So the cast was ordered to get out fur coats and long flannels and Welles led his polar expedition into the vast cavern of an ice house in the heart of industrial Los Angeles

There was real snow everywhere virgin in the field rutted in the road standing in puffs on the dead branches of trees and rails and posts of the fence along the road side Tons of ice poured into a mammoth cruncher of a snow machine and sprayed out through a tower blower made the blizzard

And—every human breath expelled a puff of filmy steam

See said Welles the real thing

In a big paved courtyard alongside the ice house the company pitched camp Here the players ate their lunches and thawed out in the sunshine between trips indoors Expensive furs boots and galoshes were provided for anybody having to go indoors and a sign forbidding anybody not so clad to enter was posted on the ice house door

The period covered in the story is from 1885 to 1913, with a kaleidoscopic background which epitomizes the changing fortunes of the Ambersons

Isabel Amberson (Dolores Costello) the daughter of Major Amberson (Richard Bennett) wealthiest citizen of a Mid Western city surprises the town when she marries Wilbur Minafer (Donald Dillaway) instead of the dashing Eugene Morgan (Joe Cotten) Morgan had while serenading her fallen through a bass viol thus revealing that he had been drinking as had Isabel's brother Jack (Ray Collins)

Morgan leaves town and in the ensuing years Isabel's son George (Tim Holt) becomes the most spoiled and arrogant brat imaginable Eighteen years pass before Morgan returns and with him is his lovely daughter Lucy (Anne Baxter) Morgan calls frequently at the Amberson home and takes Isabel and her sister in law Fanny (Agnes Moorehead) driving in the horseless carriage he is manufacturing

George resents his mother's friendship for Morgan frequently insults him Despite his arrogance however Lucy is in love with George Shortly after the death of Wilbur Minafer Fanny, jealous tells George there is gossip about Morgan and Isabel

Infuriated George calls on one of the neighbors and demands she cease talking about his mother This precipitates a scene climaxed by George refusing to allow Morgan in the house George takes his mother to Europe and they return only when she is dying Morgan again calls and although his mother is on her deathbed George will not allow Morgan to see her

When Isabel dies it becomes apparent that there is no more Amberson fortune The city is now a sprawling one and the Amberson properties are worthless, inasmuch as they are in the factory sections Morgan's automobile enterprise however, has prospered and he now owns one of the great homes of the city

To support Fanny and himself, George goes to work in a powder works Jack Amberson has managed to acquire an unimportant consulship George discovers that not even the sign Amberson boulevard remains in the city and his "comeuppance" is complete



Do ores Co o a Isabel M naf and T m Hol a h son Geo ge

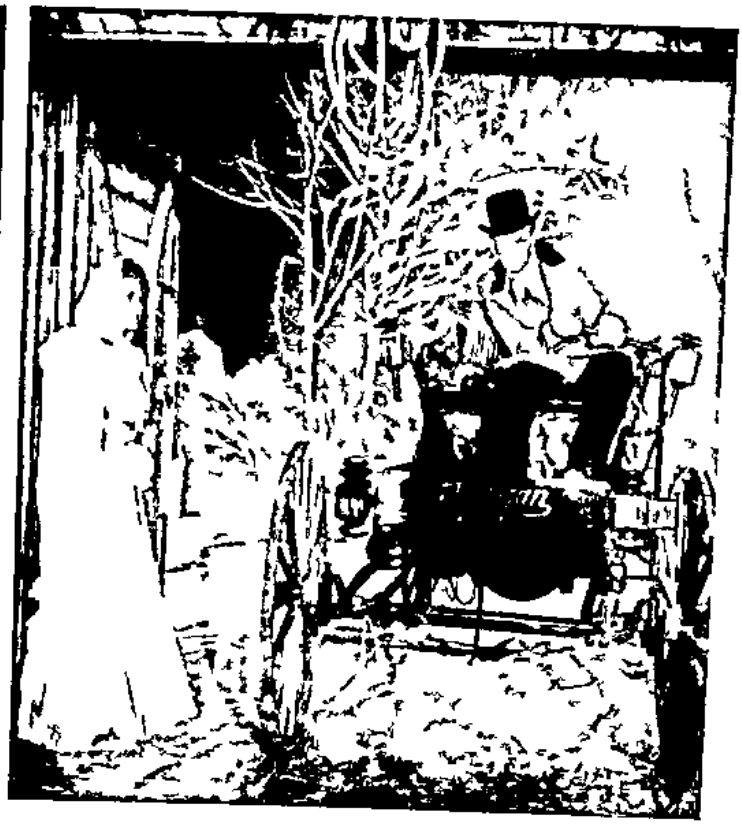


Ra Co on a Un le Ja k Amberson and Dolores Cost llo

Stills by Hal A McAlpin



Anne Baxter as Lucy Morgan and Tim Holt as George



Joseph Cotton as Eugene Morgan calls for Lucy in the latest 1900 fashion



Agnes Moorhead as Aunt Fanny Minafer



A visit to the plant of the Morgan Automobile Company

PATENTS

By ROBERT W FULWIDER, *Patent Attorney, Los Angeles*

No 2,264,350—CINEMATOGRAPHIC FILM FEEDING APPARATUS *Lloyd E Whittaker* assignor to Technicolor Motion Picture Corp Appln Oct 18, 1939 5 claims

Film feeding apparatus in which the film travels in a rectilinear path and is moved by a step-by step claw which may be moved away from the film for threading

No 2,266,435—PHOTOGRAPHIC STRIPPING FILM *Gale F Nadeau and Clemens B Starck* assignors to Eastman Kodak Co Appln March 20 1941 13 claims

A stripping film having a permanent support of celluloid carrying an emulsion and mounted on a temporary paper support from which it may be stripped

No 2,266,443—SEMIPERMEABLE LAYER FOR MULTILAYER FILM *Karl Schinzel*, assignor to Eastman Kodak Co Appln Dec 8, 1938 In Austria May 9 1936 5 claims

A multi layer color film having coupler compounds incorporated in the different emulsions and having semi permeable layers on each side of the middle layer which permit the passage of developer but not of the couplers

No 2,266,755—FILM FEED FOR SOUND RECORDING AND REPRODUCING APPARATUS. *Leonard T Hertig* (Jackson Heights N Y), assignor to Lon-Ga Tone Inc (Orig appln April 21 1937, divided) June 5 1940 12 claims

No 2,267,039—COLOR PHOTOGRAPHY *John Eggert and Gerd Heymer*, Germany assignors to General Aniline & Film Corp Appln Dec 7, 1935 4 claims

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Blackout Headlights

An ingenious blackout gadget for automobile headlights which 20th Century Fox has just acquired from England may soon be the regulation thing for Southern California motorists to use instead of blue glass or cellophane

When the Darryl F Zanuck production of "This Above All" was preparing the studio needed blackout equipment now in use in England One of the two girls of the Women's Auxiliary Air Force of England brought to the studio for technical advice offered to write to some friends in England for the lastest gadgets.

The other day the studio received a pair of metal cylinders with three narrow slits cut into the bottom Placed over headlights, enough light streams from the slits to make night driving safe yet shuts out any glare that can be seen from above

Several of the boys in the property department have already started copying them for their own use utilizing either large tin cans or making them out of smaller cans cut up and soldered together into shape

Copies of them have been shown to civilian defense officials in the Los Angeles area for possible official recommendation for general use

TWO OLD TIMERS MEET AGAIN

Charles M David of Chicago and New York and by the way the first president of Local 666 Chicago while in Hollywood for a few days stopped to pay his respects to the members of 659

Charlie is shooting one-minute movies for Colonial Productions to promote the



Charles David

sale of Defense Bonds and Stamps While here he was assisted by his old buddy M A "Andy Andersen These two worked together in Chicago when the motion picture industry was in its infancy

In these one minute movies the speakers write their own "script and Charlie and Andy say they are calm collected and earnest many of them better poised than some experienced personalities

The one minute movies in this district include Governor Olson, workers in airplane plants shipyards, bankers clerks postmen gas station workers, etc each giving his version as to why we should buy Defense Bonds and Stamps

These short clips will be spliced into the different newsreels throughout the country each locality featuring personalities of interest of that particular district

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16MM. DEPARTMENT

On 'Vaporation"

Everyone using motion picture film—amateur and professional—very early in his career is faced with those big bugaboos present every moment a foot of film is running through a projector a printer or in the process of being cut and edited—*scratches oil and dirt* And of course—*fingermarks!* Projectors may be kept in the pink of condition clean the oil kept where it belongs and guarded against any possibility of emulsion or dirt pick up from accumulating and resulting in a surface which will scratch the film running through the machine but it doesn't take many screenings before the film will begin to show signs of having been run through the projector and the resulting scratches and dirt and oil spots are more than a little disconcerting to a well made picture

In the editing of a picture scratches and dirt can be minimized by the use of white gloves in handling and lined barrels for containers. In spite of this, however scratches will result merely from the rubbing of the edge of the film against a surface of emulsion

While the problem is an acute one (without preventative measures) in the professional field because of the constant use during the life of the film it is even greater for the amateur because of the fact that after a certain amount of use a professional film is discarded, while the amateur will want to keep his film, indefinitely Added to this is the fact that for the most part amateurs use reversal film from which no protection prints are made—and the film that ran through the camera is the one which will keep running through the projector

The Vaporate Company has developed a process known as "vaporation" which protects the film *without the formation of any skin-like layer or varnish on the emulsion.* Vaporation achieves its result by hardening the emulsion and replacing the natural water content of the emulsion with a lubricating substance This lubricating material is sealed into the gelatin by the normal atmospheric pressure of the air which is admitted into the evacuated chamber when the vaporation process is complete

Quoting from information furnished by the Vaporate Company The change is effected within the emulsion itself The procedure is to place the film on their original reels into racks provided for the purpose—no rewinding is necessary—and these racks are placed in an airtight chamber the vaporating chamber, and the air is withdrawn The chemicals are introduced as liquid but enter the chamber as vapors passing through the spaces left between the convolutions of the film by the withdrawal of the air Chemicals are introduced in accordance with schedules determined by the type of use the film is to serve At the end of the schedule the film is removed from the drum, and is ready for use The unit is then ready for the next operation

The gelatin in photographic emulsion is a mass of microscopic and sub-microscopic molecular aggregations called colloidal molecules The characteristic of gelatin which enables it to serve certain purposes lies in the unique nature of its solubility In its progress from a hard dry solid to a fluid gelatin absorbs 18 to 20 times its bulk in water Unlike crystalloid substance the colloidal molecules of gelatin absorb and lose moisture slowly at ordinary climatic temperatures This makes it possible for gelatin to exist in various states between hard solidity and complete liquidity including even semi liquidity or jelly

The ability of gelatin to retain various degrees of moisture makes it an ideal carrier for light sensitive particles in photographic emulsion In its fully hydrated fluid state it permits a thorough even admixture of the photographic elements. In its soft porous state in raw stock it does not disturb the dispersal of the grain in winding to and from spools and it permits free penetration of developing and fixing chemical In the firmer state in which it appears on finished film its function is to hold and protect the elements which make up the picture

At this point the softness and porosity which were virtues become vices The gelatin still contains one-sixth to one-eighth water Loss from or additional absorption to this normal moisture content are the root of most film trouble Loss of moisture results in brittle emulsion. Excess moisture results in soft, easily abraded emulsion to the point of actual disintegration if carried far enough Porosity on the other hand encourages defacement by oil dirt, and water spots and by finger marks

Consequently after film is finished but before it is used in a microfilm reader motion picture projector, or still printer or enlarger, adequate protection should be provided against damage from climate wear scratches oil, dirt water and finger marks

It will be noted that in order to provide protection against these widely differing types of damage changes must be made in the physical properties of the emulsion which are almost diametrically opposite in effect Adequate resistance to heat and lack of atmospheric moisture requires maintenance of the pliability reserve, while resistance to damage from dampness, abrasion and the absorption of oil water and finger mark stains requires a toughening or hardening of the emulsion structure Such hardening of the emulsion structure is evidenced by the raising of the melting point in water but for proper protection this must be accomplished without sacrifice of pliability reserve with brittleness as a possible result. Furthermore these changes in physical properties must be permanent and unaffected by continued use or repeated cleaning

In the vacuum unit operation VapOrate first substitutes lasting inner resiliency for the easily lost water content of each gelatin particle to protect the emulsion against heat and brittleness

VapOrate then separately, toughens the surface of each gelatin particle after the inner lubrication is inside to seal in the resiliency to seal out water oil, dirt and finger marks, and to provide protection against scratches and abrasions against water damage in accidents floods and fires, and against mildew or other bacteriological deterioration

In treating motion picture film VapOrate then separately lubricates the outer surface of each gelatin particle after that surface is sealed to keep the lubrication outside where it eases passage through the projector and relieves perforation strain.

Again on motion picture films VapOrate then separately admits air pressure after the vaporized lubricant, in a vacuum has reached all the surface of every gelatin particle Ever present normal air pressure keeps the lubrication impregnated so that cleaning fluid will not destroy its effectiveness, and so that it will survive much use

These four separate steps taken one after the other in proper sequence provide adequate and permanent protection

Such adequate and permanent protection may be specified as subjecting the finished film to a permanent conditioning and protective treatment, reacting directly on the emulsion itself the effectiveness and permanence of which are evidenced by a substantial raising of the melting point of the emulsion in water without loss of the pliability reserve in the emulsion

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Photo finish

(Continued from Page 16)

fool anyhow as I found out when Eddie Robinson came up to me and said "Slim you should have raised that beard a long time ago It's your making And you're being talked about around the casting offices Why I happen to know that whenever they consider Walter Brennan for a part, and can't get him because he has other commitments they immediately think of you Of course they don't hire you instead of Brennan—but it's a step forward to know that they think of you!"

Nice going The only guy I ever know who got rich just by thinking was a guy who did ten years for swiping a million dollars When he came out he had to spend a week thinking where he had hid the million!

Well I finally got a call to go and see Raoul Walsh who was about to make *They Died with Their Boots On*, with Errol Flynn playing General George A Custer I made the interview, the assistant said swell I got fitted for a trooper's uniform —and I was off to the Indian wars

Everything went along swimmingly and for a while I was doing all of my emoting on foot, just standing around the army posts and likes of that Which was swell because each and every night I came home with fifteen more frogskins for my reincarnated grouch bag And to make matters better there were no local tracks operating to lure me back to Sucker's Row!

Well came the time for the filming of Custer's last charge and the all out Battle of the Little Big Horn It was a great set up with an exact replica—so they told me it was—of the Little Big Horn laid out on Warner Brothers Ranch which is out on that plateau just over Cahuenga Pass

We were all standing around on this particular morning when suddenly Walsh called for quiet, and then he said "Now then these next scenes—which will take a week or ten days to shoot—call for horsemen If there are any of you who can ride—and I mean ride—let him step to one side The rest of you and this is no reflection on your work as actors can wash up and get your checks We'll call you back later For those of you who are proficient horse riders I'm going to raise the ante from whatever you're getting a day to thirty five

I was well on my way toward washing up and getting my fifteen smackers when Walsh made that crack about giving thirty five clam shells a day to those who remained and rode those charging horses

Now I hadn't been on a nag's back for about twenty years which was one Sunday morning back in Central Park when I was trying to make the grade with a horse minded dame I had met in a peakeasy the night before and anyway those Central Park bridle horses are only hobby horses that have been animated and wired for sound When Walsh had started to talk I knew well enough to want to keep both feet on the ground—especially at seven and a half per foot—but for the sum of thirty five buckeroos I considered myself a centaur

So I stuck and they gave me a horse

When this happened it was along about noon time so when I went to lunch I bought me a box of lump sugar and a pocketful of carrots This of course to get on friendly terms with the horse He was more than willing to be friendly and he went through that sugar and those carrots like he hadn't eaten for a week

So far, so good—and presently we were ready to go through the preliminary paces of the immortal charge into oblivion I was put in the first line of cavalrymen on the outside and we came along like the highly touted forward wall of a college Rose Bowl team We sure looked pretty, with our long hair flying in the breeze our sabers glistening in the sun and thirty five dollars for each day of this looming in the offing

Now according to history, the Warner Brothers script and Walsh's own ideas on the matter General Custer leads the way who is on the screen Errol Flynn with his hair down But in these scenes General Custer was Yakima Canutt the western stunt man deluxe Yak was made up to look like Errol Flynn who was made up to look like General Custer who never would have looked like Yakima Canutt unless Custer had made up to look like Errol Flynn who in turn would have had to make up to look like Yakima Canutt in which case the picture would have been called *They Died with the Other Guy's Boots On*—which picture possibly never would have been made and I would have been right back in vaudeville which right now is nowhere

Well as I started to say the bugler blew the order to charge—after Walsh blew a whistle at the bugler—and General Custer broke on top which means he was off to a flying start with our first line of offense —a field of twenty—in a photograph finish for second place

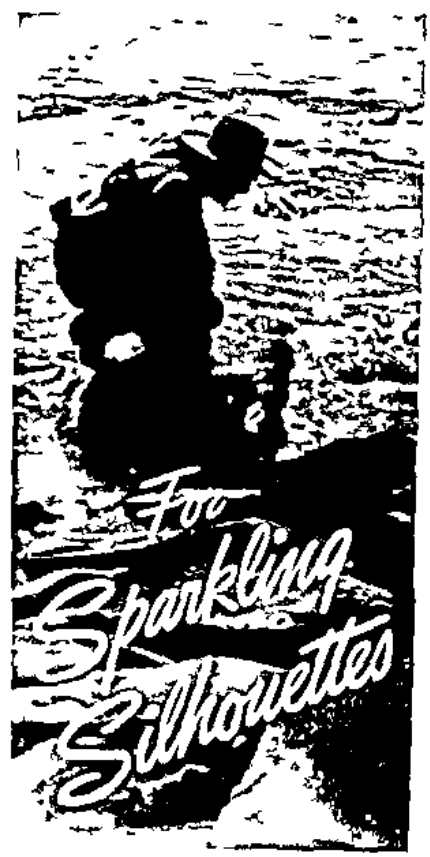
Custer was out in front by six lengths when my horse took a sudden crazy lease on life He let out a snort heaved his chest like a fighter who's behind coming out for that do or die last round—and made his bid Boy I pulled away from that mob alongside of me so fast it looked like the 7th Cavalry was retreating—and presently although I pulled the horse like nobody's business I was neck and neck with General Custer!

But not for long

A second later I was completely out in front by twenty lengths and going away like a bat out o' Hell All of which spoiled everything Walsh called Cut bawled me out and we tried it again

Again I outdistanced the field Custer included and again Walsh wanted to know Whatinell's the idea?

I said Nothing Then I timidly sug



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gested that they give Custer a faster mount They did, but I "won again And during the next bawling out I thought I was suddenly possessed of the solution Mr Walsh why not let General Custer ride my horse?"

But that was ruled out Custer's horse was a white one while mine was as black as the ace of spades

Besides" remarked Walsh I want General Custer to look like a leader leading his men—not running away from them!"

A few minutes more while Walsh drank a bottle of pop and raked his resourceful brain Finally he tossed the empty coke bottle to one side and said "We'll try it again only this time we'll put rocks in your saddle bags

That's a good idea!" I ventured as if Walsh didn't know it

One other thing Slim" he added "As you ride past the cameras I don't want you to give me any more of that ad lib dialogue!"

Mr Walsh I'd not aim to be one bit disrespectful, I said, "but if you can ride this horse without once opening your mouth in oral self-defense you deserve a special Academy award for self restraint!"

That was that and again we tried the scene and again my horse crashed the winner's circle- for which I felt this time I would be barred from the Custer Sweepstakes for good

But Walsh had a better idea

He had me made up like an Indian—the only bearded brave at the Little Big Horn I expect. I made mention of this but Walsh said that that was okay 'cause this was a long shot, and it would look like I was carrying some white man's scalp in my teeth

He has an answer for everything that Mr Walsh

So I joined the red-skin riders and that worked out swell because we were riding in an unbroken circle and there just ain't no front end to a circle!

Well after a few gruelling hours of this my horse was a bit on the winded side and so I washed up put my cavalry outfit back on and rejoined my regiment

This time all went well The charge came off fine with each horse in his proper slot my bundle of dark lightning included

But at the end of each day—was I a sore cookie! I was literally a drugstore cowboy, because I'd head for a drugstore on my way home and I'd put on lotions and salves to soothe me—well my aches and pains

The reason my girl nearly died laughing when she saw me in the picture was because she knew the end of this story, which you don't but which I'm coming to right now

Each morning and night we were transported to and from the location in one of those big studio busses I had been on the battle sequence about five days and coming in on the bus who should sit down beside me but little Joe the guy who used to tout me at the race track He took it seemed was sorely in need of fresh scratch and I was working in the picture I didn't ask him what kind of a character he was playing But judging from his size I assumed that it was a papoose

"Say Slim," he says after he's accepted one of my cigarets with it being asked to "but you know you were riding my horse today?"

"What do you mean—your horse?" I exclaimed "I've been riding him for nearly a week!"

"No I mean our horse at the race track That's the nag we used to bet on remember?"

What?" I whatted

"Yeah That's Prickly Heat!"

But what's he doing here?"

"Race horses have to eat too, you know"

Well how do you like that folks? I finally had to ride that black buzzard myself to get him into the money!

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Aerial Gun Camera

(Continued from Page 10)

may be replaced with a straight lens arrangement to get ordinary pictures without the gunsight if desired Also, provision is made to heat the lens electrically against the cold of high altitudes.

Oddly enough if the picture shows the sight directly on the target, the shot is usually a clean miss. It is clear indication to the instructor that the student has not taken sufficient "lead" in aiming his gun ahead of the swift moving adversary plane Only when the attacker is directly on the tail of the target or when the two planes are flying directly toward each other is such an aim good for a hit In any other flight maneuver it is necessary for the gunner to lead his target making allowances for the distance between the two planes the speed at which his ship is traveling and the speed of the adversary plane And it is in the measurement of the lead which the gunner takes, which gives the new equipment an important advantage

Each frame of film has four index marks midway on the sides the top and the bottom of the frame The camera is adjusted before takeoff so that the sight an electrically lighted two barred cross coincides with these index marks on the first frame of film By this arrangement, if the sight shows the aim to be a certain distance ahead of the nose of the target actually the guns of the attacking plane would be pouring a stream of lead into the opponent

Can Determine Hits

The developed film is projected on a small viewer screen equipped with a mil scale of fine shadow lines around the edges so that the instructor can view the frame critically measuring the amount of lead taken by the gunner and with the known facts of the speed of both planes can determine whether the frame should be scored as a hit

After the instructor scores each strip of film he can call in the pilot who made it and point out his errors. Frequently the film is shown to a group of pilots in the classroom on a larger screen, also equipped with the mil scale so that the whole group can benefit from the discussion of hits and misses.

As a simple means of identifying each film with the pilot who shot it, the Wright Field armament branch technicians have suggested that each magazine be placed in a hand movie camera by the instructor who takes a few frames of pictures of the pilot who is to use the film in his plane The daylight loading magazine is then

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taken out of the hand camera and loaded into the GSAP camera for use

Processing Almost Automatic

Early in the use of gun cameras it was learned that a principal advantage to the trainee was to see the results of his training flight as quickly as possible after it was made So Wright Field technicians and camera manufacturers have developed a nearly automatic processing technique which the armament mechanics without expert photographic knowledge can use Without divulging the details of the processing it may be said that it develops the negative reversed as a positive so that it can be used in a projector immediately, and that it comes out of the process spooled on a reel ready to go into the projector in a very short space of time Thus the student is enabled to see his pictures the same day he makes them

Waste More Deadly Than Sabotage
By Harry M Warner

One hundred feet of wasted film may cost the life of an American soldier who may be your own son or brother

With these words Harry M Warner President of Warner Bros Pictures opened his address to a meeting consisting of cameramen players executives directors and writers called to discuss conservation of materials at Warner Bros Studios

Said Mr Warner I am not asking you to eliminate waste merely because of the dollar and cent value but because of the materials involved It makes no difference if you're in the picture business or the grocery business Every foot of lumber every nail and every bit of material is vital to the war of production that our country is waging with our enemies It is this all out marshalling of our resources that is going to prove the decisive factor in this struggle for freedom Therefore it is up to every individual to save, save and save on materials so that our war machinery will have the materials to forge into munitions ships guns tanks and planes

"One sheet of paper wasted may appear insignificant But unfortunately there may be 130 million sheets of paper wasted in a single day throughout the United States Think of what that means in terms of machinery tied up and labor employed that could be utilized for war production

A take is ruined because a mike shadow was cast upon the face of a player or the player missed his lines It is just a hundred feet or so of wasted film The dollar value is trivial but the material value is great For just multiply the wasted takes throughout the industry and we have a staggering total of film material lost Once again the man power and material and machinery needed to replace that waste could be freed for war production

Who would have thought just a few months ago that tin cans would be so important in the film business? Yet, unless we can return empty film cans we can't get any new film because of the shortage of tin for our war machinery

We have not as yet and when I say we I mean the American people gotten down to all-out war effort It isn't enough that we buy defense bonds act as air raid wardens help in civilian defense or our sons go off to camp It is up to every single man woman and child to start thinking and practicing wartime economy at home and in business And that doesn't mean merely the saving of dollars It means the saving of our nation's resources the conservation of materials and the absolute elemination of waste

We in the motion picture business use tremendous amounts of materials of every description Materials that today are of vital importance in our national defense Let us by our almost fanatical devotion to the elimination of waste make free this saving of materials for war purpose

Waste is criminal at all times" concluded Mr Warner but in times of war it is worse than the sabotage of enemy agents After all saboteurs can destroy only so much but with 130 million people daily wasting materials the aggregate loss is staggering And conversely the saving can be enormous

Therefore I again urge everyone to help America win this war by constant vigilance against waste"

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CAPITAL AND LABOR NEGOTIATE



(Photo reprinted from *Motion Picture Herald*)

Labor negotiations of the motion picture industry took place January 9 1942 and hearings lasted fifteen consecutive days.

The regular meeting was called to order for negotiations of wage scales and working conditions between representatives of ten motion picture studios and the different IATSE locals working in the industry. In addition to the studio managers who customarily deal with the union representatives and the labor committee representing the individual producers which consists of Pat Casey and Fred Pelton there were present at these meetings the top ranking men of the various companies.

During the hearing an opportunity was afforded for both sides to air their differences. Details were considered as well as generalities and thought was given to problems confronting the casual worker as well as the general employee. The representatives of capital were most gracious in their admissions that the studio employees represented at the meetings were men who had contributed significant improvements and innovations to the motion picture industry. They expressed the thought that from the outcome of these meetings would emanate a general goodwill policy and better understanding that would bring about the type of harmony and cooperation needed to pull the motion picture industry through these times of stress.

Labor expressed itself as being willing to work harder than ever and hoped that through the combination of better relations it would be able to bring each picture in under the schedule of at least one day.

Present at these hearings were Twentieth Century Fox represented by Sidney R. Kent President W. C. Michel Vice president and Fred Meyer Public Relations Manager RKO George Schaefer President Major Leslie E. Thompson and Reginald Armour Loews Inc. Nicholas Schenck Universal John J. O'Connor and Studio Manager Dave Garber Goldwyn Keith Glennon Paramount President Barney Balaban and Studio Manager Charles Boren Columbia Vice-president Jack Cohn Arthur Schwartz and William Hopkins Warner Bros. J. H. Hazen and Studio Manager Carroll Sax Producers Labor Committee Pat Casey and Fred Pelton.

Representing the cameramen Gus Peterson Gill Warrenton Burnett Guffey and Business Representative Herbert Aller. The electricians Business Representative A. J. Mike Moran and Joe O'Donnel. Sound Technicians Business Representative Harold V. Smith. Studio Grips Business Representative William C. Barrett. Wardrobe Workers Business Representative William L. Edwards. Studio Prop Men B. C. Duval. Studio Laborers Zeal Fairbanks. Make-up Artists Ern Westmore. Laboratory Technicians Business Representative John Martin and Norval Crutcher. Projectionists John F. Swartz.

Representing the IATSE President Richard F. Walsh Secretary Treasurer Louis Krouse and International Representative Carl Cooper.

Historical Subjects Prepared for War Training Films

Lieut. Colonel Darryl F. Zanuck Chairman of the Academy Research Council today announced the start of preparation of a series of War Department Training Films on historical subjects. A group of leading screen writers will contribute their time for the next three weeks to write scripts for these films.

Jerome Chodorov, S. K. Lauren, Ted Paramore and John Sanford left for Washington by plane recently with Leonard Spigelgas, Julias Epstein and Philip Epstein scheduled to leave within the next few days. The entire group will work in Washington under the guidance of Lieut. Colonel Richard T. Schlosberg and Major Frank Capra, now on duty in the office of the Chief Signal Officer at the War Department in Washington.

Arrangements for obtaining these writers' services were worked out by the Research Council in cooperation with the War Emergency Committee of the Screen Writers' Guild under the Chairmanship of Ralph Block.

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MAKING COLOR CARTOONS AT UNIVERSITY OF MINNESOTA



Karel Dodal at work on color cartoon "Paul Bunyan" at the Visual Education Service University of Minnesota

Minnesota's famous giant. Paul Bunyan" is being made into a ten minute animated color cartoon at the Visual Education Service University of Minnesota.

This Goliath has been felled by a modern David artist Karel Dodal who is using a sling shot of film and a rock of animated cartoons. Dodal a native of Czechoslovakia came to this country after having achieved real success in the animated cartoon field in Europe. He made a number of shorts and before the war he represented Czechoslovakia at the World's Biennale in Venice and Paris. His technique has something soft and dreamy emanating from his Slavic origin.

Today this European Disney is working with fifteen artists at the University of Minnesota on this fantastic Paul Bunyan story. When completed it will be a one reel film of more than 15,000 individual pictures.

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Visuality according to Alfred Hitchock, is 80 per cent of the battle in making successful motion pictures. Other elements, he explained are sound and dialogue which rate five per cent in his estimation and player moods which account for the other five.

"It's what strikes the eye that leaves the most lasting impression on silversheet audiences," he declared. "A little piece of business properly photographed means more than a 1,000-word speech."

IN THE MAIL

Mr. Herbert Aller
6401 Sunset Blvd.
Hollywood, Calif.

Dear Herb:

Re my phone to you re Alf Lathem's death—burial Feb. 23—I'll give you just a few details of his work in motion pictures prior to his retirement on account of ill health a few years ago.

Alf was a friend of Eddie Ullman their families knew each other in Alabama where Alf was a clerk in the Alabama courts. He became my assistant back about 1915 or 16 was with me in that capacity for several years and then became Hoot Gibson's cameraman. Later his health failed and when he returned to work he was unable to get back into the camera work so took a job as an electrician. This work was too heavy for him as he had heart trouble and finally had to give it all up.

His wife Maude Lathem, is editor of *Science and Mind*. She's a very talented woman a sister of May Allison, the former star of silent pictures.

I was looking at a picture today of a lunch of us photographed in 1921—the cameramen at Universal. Among them were Eddie Ullman, Leland Lancaster, Bert Glennon, Bob Pittack, Harry Fowler, Milt Bridenbecker, Bob DeGrasse, Ben Bail, Alf Gosden, Herman Schoppe, Billie Edmond, Jake Kull and about twenty others—many of whom have passed on or are out of the picture.

Since he has been so long "out of the picture" I felt that a little word in the magazine will at least remind his friends that he wasn't forgotten that he was one of the boys who helped in the old days when pictures were in their swaddling clothes when cameramen "panned" tilted, followed focus, cranked their cameras, did their own special effects, watched their lighting and made their own stills—that was about all they had to do then—but now.

Anyway thought you'd like to know and let Alf know that his memory lives on in the minds of us old timers.

Sincerely,
VIRGIL MILLER

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For 20th Century Fox

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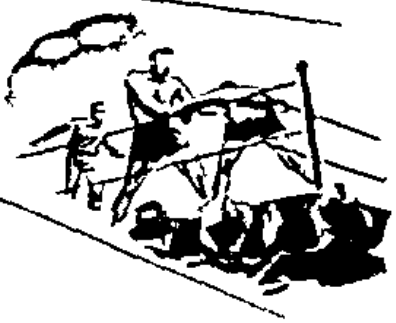




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INTERNATIONAL photographer

Vol. XIV April, 1942 No. 3

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Editor, HERBERT ALLEN

Business Manager, HELEN BOYCE *Art Editor*, JOHN CORYDON HILL

Contributing Editors D K ALLISON, GEORGE HURRELL, CHARLES SAXTON, ROMAN FREULICH, ERNEST BACHRACH, ALVIN WYCKOFF, WILLIAM V DRAPER, FRED GATELY, GEORGE SCHEIBE

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RUMOR

Absolute knowledge I have none,
But my niece's washerwoman's son
Heard a policeman on his beat
Say to the laborer in the street
That he had a letter last week,
Written in the finest Greek,
From a Chinese coolie in Timbuctoo,
Who said the Negroes in Cuba knew
A colored man in a Texas town
Who got it straight from a circus clown
That a man in the Klondike heard the news
From a group of South American Jews,
Who heard of a society female rake
Whose mother in law will undertake
To prove that her husband's sister knows,
As stated in a printed piece
That she has a son, who has a friend,
Who knows when the war is going to end

(From Los Angeles Times, March 19, 1942)



"Sheridan for Victory" By Scotty Welbourne, Warner Bros

photography at lockheed

By David Wood

For the following article, about which so many readers have expressed interest, we are indebted to Mr. J. H. Washburn, Chief of the Photographic Department at Lockheed Aircraft Corporation, Burbank, California and his very competent assistants: A. J. Ground, L. O. Gould and W. Roy Watson.

David Wood, who wrote the story, is the pseudonym of an engineer and manufacturer of wide experience during World War I.



This is the way the bill of material is put on the photograph in the engineering department before it is printed. Little chance for a mistake here.

THIS IS A STORY of how photography has come to the aid of engineers and production men in the great Lockheed Aircraft plant. Photography always has been an aid to the engineer in the field. If he wanted to build a dam, photographs were taken of the proposed location and a study was made of the best place to build the project. That's old stuff. But for photography to come to the aid of the men in the shops in the building of airplanes or any other manufactured article is something quite new.

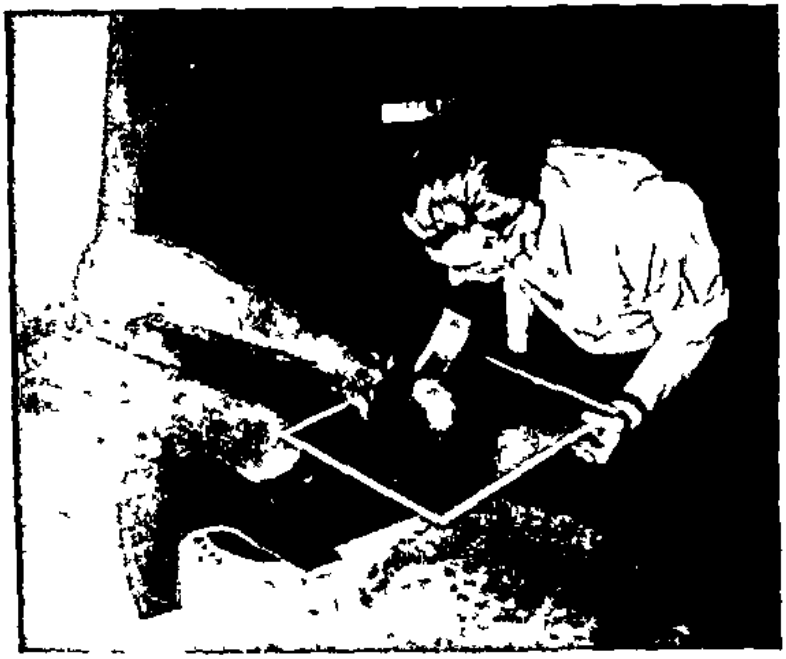
In the old days the engineer made a mechanical drawing of the completed unit and each of its component parts, then tracings were made on transparent paper or cloth and blue prints made from the tracings so that any number of copies of any particular drawing could be used throughout the factory. It was then necessary for the planning department, the tool department and the manufacturing department to lay out upon the work itself the lines around which the particular piece was to be made and in every case the man in the tool room, the man on the machine and the man in the production department had to adhere strictly to the dimensions as shown on the print. All of this required a considerable knowledge of mechanical drawing, tabulation of material and actual work by the man to dimensions which he himself measured upon the work as it was being done. To be sure the tool room used to provide him with go and no-go gages to make it easier, but it still was a slow and laborious process to make the first few of any particular part. If a dimension happened to be omitted on a drawing it was necessary to refer back to the engineering department, check and re-check with the other drawings so that no interference might occur when the part in question was fitted to any other part. Lots of times they didn't fit and then it was necessary to "force" a fit, putting additional strains where no strain should be, with a result that might prove disastrous in the finished product. That was a dangerous as well as an expensive procedure. No workman would be allowed to lay his scale upon the blue print in order to determine some particular dimension because of the shrinkage of the blue print paper, the shrinkage of the tracing and the variation in dimensions due to weather conditions.

When templates were necessary great care had to be exercised in laying them out and dimensions carefully checked. Even under those circumstances errors were not discovered until the fabricated part found its way into the hands of the mechanic and on the machine where it was to be built.

BUT THAT'S ALL CHANGED NOW! At the Lockheed plant drawings are made in the engineering department on the surface of non-changing metal and that drawing is then handed to the photographic department where under the supervision of J. H. Washburn, head of the department, things are done to it that in not so recent years would have been considered almost a miracle.

The draftsman doesn't have to make the drawings full scale. It may be half as large as the finished part, twice as large or any predetermined size which may be convenient so long as the engineering department tells the photographic department to what scale the original drawing is made. From there on the photographic department will take care of it.

Cameras of unbelievable size, large and minute, have been developed so that when the engineer's drawings is photographed the variation in any dimension is held to a tolerance of *one one thousandth of an inch to the foot*. Now think that over. It doesn't mean that a part two inches in diameter is held to a tolerance of plus or minus one one thousandth of an inch—it means that the *tolerance on a two inch piece* is held to *one-sixth of one one thousandth of an inch in either dimension* under or over and



Shearing the template from the actual photograph on the material itself.



Fitting the formed part to the duplicate of the metal photograph from which the part was made (It has to check)

Well, here's where the photographic department comes in again. If you had to put a complicated set of cable terminals on their respective lugs by reading the old fashioned blue print, where those that went under the top ones had to be shown in dotted lines and where perhaps two went under the same other one at the same place, the dotted lines would become a bit confusing. You'd have to stop and figure how to get them in. Maybe then you'd get 'em right—and maybe you wouldn't!

But the Lockheed photographic department doesn't take any chances. It has an original set of these cables made up in the engineering department by the people who knew where the lugs were and what cable went to what lug because they designed it that way. Then the photographic department takes the finished terminal block, or any other object which may be needed and puts it on an especially designed translucent plate, with a camera suspended above it and by the scientific use of lighting photographs the actual terminal block. Then by turning out all of the outside lighting and obtaining all the light from beneath the object a second film is made which results in a perfect mask around the outside of the object originally photographed. The original negative and the mask by means of location marks are placed together and then projected upon blue print paper leaving a clear and distinct picture that even the dumbest of us could hardly fail to understand with a clear white background upon which has previously been projected a bill of materials (by part numbers and description) of all the pieces that go to make up the particular assembly, or sub assembly of which the print is a true picture. By this method mistakes are rarely possible.

And that isn't all the photographic department does. It makes the work of the man in the shop much easier and it can within a very few minutes make changes required by the engineering department and superimpose upon the original photograph the actual changes to be made in order to avoid mistakes.

This story is conclusive proof that in the increased production demanded by Uncle Sam, the engineering photographer has been wide awake and offered that invaluable help which has always been so characteristic of Yankee ingenuity.



Still cameraman George Hommel shooting kodachrome stills of Republic's western star Don Barry and his leading lady Lynn Merrick. Bill Gorseman, electrician, is standing beside Hommel.

pepping up flash pictures

By Jack Albin



Left This shot was made out of doors on a cloudy day by using the extension light and the light on the camera Center Linda Darnell. Lighted with one 21 flash bulb in extension four feet from the subject and one 21 in flat reflector on camera Right Ann Rutherford in the doorway of her home One 21 flash bulb in Victor extension reflector was placed outside the door covering the full length of the figure and one 16 bulb was used in the flat reflector on the camera.

The author is a member of Local 659 He photographs for *Screen Guide Stardom Click* and *Movie Radio Guide* Last year he had 38 magazine covers published in color

MANY OF US have become just plain tired of straight flat lighting from a single flash bulb attached to the camera Occasionally too we have had a perfect subject and setting before our cameras, with only a Graphic and single flash bulb with which to shoot. "If only I had some lights with me what a shot this would be!" has often been the expression of a hampered and disgruntled photographer

Here's a way to improve on those flat lightings with a minimum of trouble Get a couple of Victor reflectors and have an electrician hook them by plugs to your battery case Now you have three lights one on the camera and two on cords that you can move wherever you like These reflectors are equipped with clamps that can be used to hook them on any steady support The intensity of light from the Victor is stronger than the light coming from the reflector attached to the camera, so care must be taken in judging distance from lamp to subject. Using a smaller bulb in the extension reflectors also evens up the light or lessens it as may be required in any particular case

Schuyler Crail has been using such a set up on both his Graphic and 8 by 10 with great success for a long time He also uses the extension to lighten backgrounds where newspaper reproduction pictures are needed

My magazines, *Screen Guide Stardom Click* and *Movie Radio Guide* constantly are demanding natural backgrounds rather than the prop Roman column and many of its relatives which have become such bromides in many fashion sittings I constantly use extension flash reflectors to get away from the ordinary flat flash bulb lighting effect.

In working out of doors the extension reflector is also an aid to better pictures It helps to fill in deep shadows and illuminate back lighted subjects. Some time ago in shooting a fashion sitting of Linda Darnell out of doors the sunlight began to fluctuate and then fail entirely due to storm clouds. Whipping out my extension reflectors made it an easy chore to finish the picture without losing the outdoor feeling

Kodachromes are materially aided by the use of a 21B blue bulb in the Victor reflector Sometimes when your subject can't take the usual silver reflector pouring sunlight into her eyes, try a flash bulb Do not use too slow a speed out of doors with a synchro-flash as the closing of the eye with the flash sometimes will give a veil over the eyes and spoil the shot Certain instances have proven a need for both a silver sunlight reflector and a blue bulb in order that shadows do not become too dark for reproduction in four-color gravure



Ann Rutherford The strongest l ght near the subject is on the right in an extension Flat l ght from the front

IT'S A MAN'S WORLD, LADY!

By Charles Saxton

The Round Table at LeMaire s Bar is the favorite gathering place for us Knights of the Newsreel LeMaire s is where on rainy days we gather to get our nose wet while keeping our feet dry You always can find some of our gang there even v l en the sun is shining If the boss of any of us wants us LeMaire s would be the first and last place he d think of calling—meaning there s always son e of us there from the first thing in the morn ng till the last thing at night

Well now that you know v hat I m talk ing about I ve just been thinking of the period of time during which the Round Table at LeMaire s resembled a birthday cake with a cut containing the most straw berries missing That was the time when King Arthur was lensing around Europe on the Axis s de of the news movies King Arthur was our name for Arthur King newsreeler deluxe boss of the round table a king among his fellows

Many s the ro sterous gatl ering of ye kn ghts of the lens at this round table w th the king hold ng court But during l is absence in Europe and whenever the gang got together there v as always a vacant chair reserved for the men ory of the de parted King Arthur And a glass was f lled for him too whenever toasts were drunk

Only once during King Arthur s absence d d another person sit in the regal chair and that was a dame But she didn t know about the revered chair or the round table at LeMaire s up to then and I had to tell her about it You see this dame was a Johnny Come Lately among us news reel guys and I m not kidding when I say she was a newsreel cameraman She was known as Tomboy Smith and I happened to know she got the news photo bug from when she made stills of society and fash tions and l kes of that You d think that sort of stuff was just her niche cause she looked like she belonged in the blue book Class stuck out all over her and she could wear clothes like nobody s business

But somewhere along the l ne she got it into her pretty little head that she wanted to chase news clips just like us men and she never quit haunting the newsreel of fices until one day one of them sent her out on an impossible y arn and she came

back with the bacon Well from that moment on she was in, and though resented at first by the Knights of LeMaire's Round Table she soon wheedled her way in—and we got to like her That is up to the point of explosion Meaning that we wanted her to be around when King Arthur came back from the wars

Now a word or two at this time about King Arthur or Arthur King He was as handsome as a collar ad and he had no objection to women in their place and don't kid yourself they flocked around him like flies But his work that of a newsreel ace was entirely in a man's world He would object no end to the female of the species invading his kingdom which was just what this Tomboy Smith was doing and that's why we wolves couldn't wait for that day to come when the two should meet

Naturally we never told Tomboy what was in store for her

Now you might ask how I happen to know all these things but you see I happen to know Arthur King better than any guy living I guess He put me in the business I learned the ropes by being his camera boy his tripod stooge

One thing I could never learn however was how to handle my dukes like King and he had put his ten knuckles into play on more than one memorable occasion Also he had a great gift of gab had King could talk on any subject He was a born diplomat if they ARE born but he wasn't averse when words with a fool failed him, to slug his way out of a spot—particularly if he was right Which he usually was He was a great apostle of ole Teddy Roosevelt, and Teddy must have been thinking of American guys like King when TR made that memorable crack about speaking softly—but with a big stick

One day when the gang was beginning to wonder when King Arthur would be back in our joyous midst his boss—who happens to be mine too we work for the same reel—got a cable in our office code asking that he be officially notified that he was fired Now to guys like me in the know that strange request meant but one thing Arthur King was about to pull something big over there but it was something that he didn't want to reflect on the integrity of the American newsreel firm which had sent him abroad He had done such a thing—having himself fired for a secret reason—on other occasions—and I started putting my ear to the ground for the fireworks Well I found out—at a later date—just what happened but for the purpose right here of good story construction I'll give it to you now in its chronological place

As I have said King Arthur had merrily axised his way back and forth between Berlin Rome and all German occupied points But he got fed up at long last, with photographing only those things which the Nazis wanted him to photograph Or they'd give him "handouts"—stuff made by Signal Corps of the German Army And that stuff was enough to make any self respecting lenser laugh out loud Yes sir the red blooded King was suffering in silence as he trailed along with the sweep of the Swastika across the lowlands of Europe and the Scandinavian Peninsula and witnessed first hand the cruelty of Hitler's might He saw many inhuman horrors which Herr Goebels and Company had forbidden him to photograph His permission to work in the field follow the movements of the Nazi forces was based on his firm's promise that King would not picture anything that was tabooed or not okayed by the proper authorities of the Nazi High Command

So—King Arthur cabled home asked to be given the sack The boss obliged and as I have said we waited to see what gives out

Well Arthur King with his hand camera now completely disentanged from subtle subsidy made some pictures that were calculated to show the blood stained Swastika for what it was Of course in order to do this King had to work with the secrecy and daring of a spy

He made some pictures in the occupied countries that were Masterpieces in Murder—and he was doing all right getting together this album of atrocities when the rats of Wilhelmstrasse smelled a mouse Whereupon Himmler's Gestapo loused up King Arthur's every step and one evening they walked in on him at his rooms without knocking They frisked the joint and and turned the place upside down but didn't uncover a thing in the way of forbidden films or evidence But the negatives of the precious stills were there but cleverly hidden since King Arthur was looking forward at all times to such a moment

Well the Gestapos took him to the offices of the Propaganda mill where he was sweated and grilled but his wily questioner got nowhere fast Then when this Nazi ferret was about to summon the two guards outside and have King put on ice King lashed out and knocked the officer for a row of swastikas

Soon King Arthur now changed to the unconscious big shot's uniform came from the room locked it from the outside and summoned the two guards to come with him King led them back to his rooms muttering something en route in German and for their benefit that *he* personally was going to examine the American's effects

At the rooms, and leaving the guards outside the door King Arthur retrieved the precious negatives—which were hidden in the toilet commode under the bed!

Then King called one of the guards into the room polished him off and left by another door in the unassuming uniform of a German private Working fast he picked up with another Heinie private who was leaving with a regiment for Norway at midnight King got the guy drunk, swiped his identifications, and left for Norway in his place

Once in Norway, in the guise of just another Nazi he managed to maneuver into the path of some Norwegian patriots gladly gave himself up and soon identified himself through a Norwegian correspondent With that done, and attired in Scandinavian mufti King made quick contacts through the correspondent and tied in with a fishing smack loaded with young Norwegians who were making the dangerous nocturnal dash across the North Sea to join the British

From England King Arthur made it to Lisbon where he soon got on a Portuguese freighter headed for Rio From there he boarded a Moore McCormack liner which was headed for good old New York

Phwew! Wotta guy!

None of us knew that the unpredictable King Arthur was even out of Europe when we representatives from all the major newsreels went down into the harbor aboard a cutter to meet a liner from Rio bearing a very important Pan American senor Gonzales yeah—that was his name

Well when the gang clamored aboard and searched the decks for the distinguished Latin visitor we finally came upon what must be he—with beard and all the trimmings even to an ambassadorial ribbon of red across his proud chest He didn't speak much good English this hombre and his dialect sounded to me like that of a budding burlesque comic, particularly when his excellency gave me a furtive wink and I recognized him as none other than our own long lost King Arthur!

The rest of the camera boys were lined up—including Tomboy Smith—like a firing squad The senor was most affable showed interest in our cameras, and asked to look at my Eyemo I handed it to him and he had a hard time handling it in an unprofessional manner

Right then and there I knew The King was going to pull one of his famous rabbits out of the hat, and it wasn't long in coming

As I say he posed for the cameras bowed graciously and finally the gang left all except me whereupon the senor went back into his stateroom—from which he emerged a moment later with the real Senor Gonzales the Senor's young son and the Senor's lovely wife And then King Arthur made some pictures and that's how King Arthur scored his first news beat back on his home grounds before he was even within focus of the Statute of Liberty!

I was more than happy to surrender the assignment just to see ole King in action and let me tell you it was a surprised boss when King walked into the private office and asked for his job back, as he threw the can of undeveloped negative on the desk and grinned "And here's an exclusive on the arrival from South America of

(Continued on Page 22)

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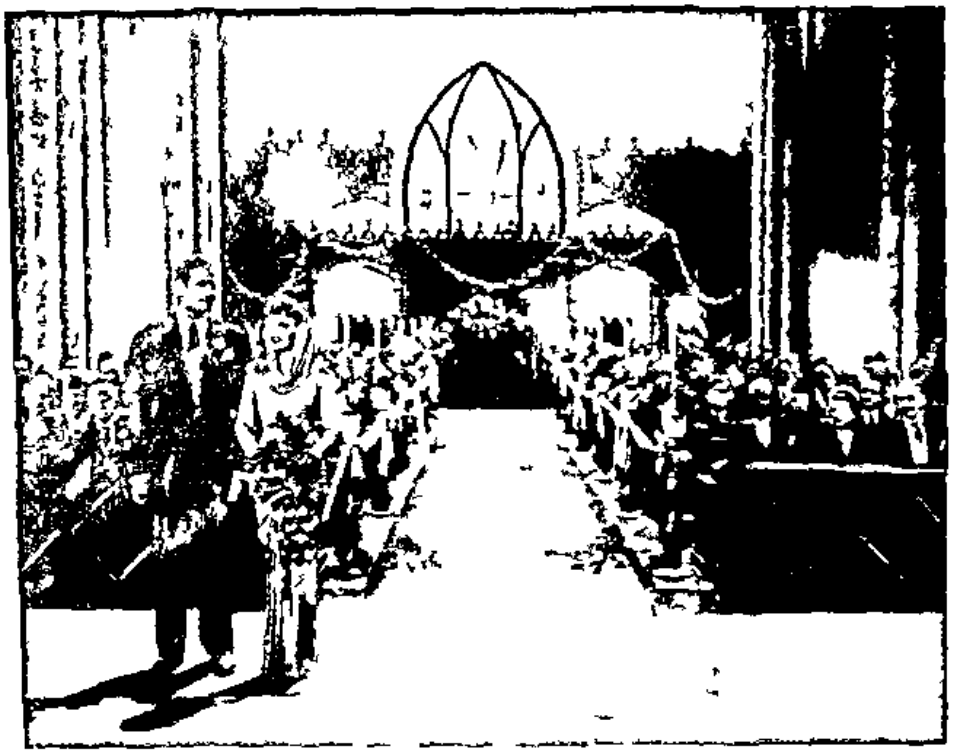
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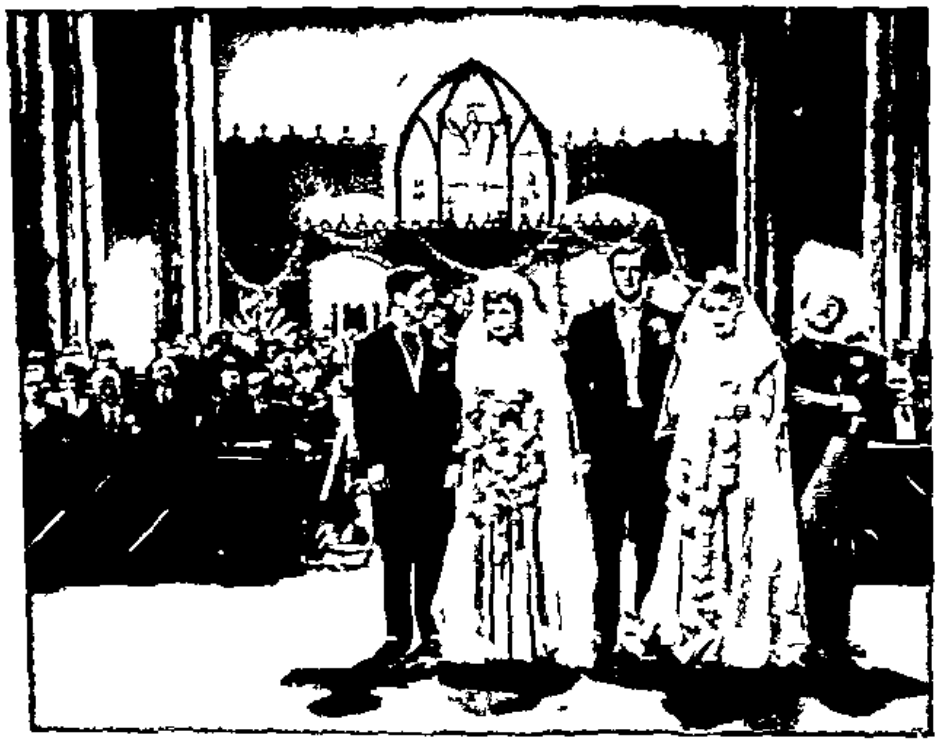
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"THE PALM BEACH STORY"



The p ctures in this article are by Kenneth Lobben and represent a fine example of split screen technique Picture No 1 shows Joel McCrea and Claudette Colbert



Picture No 2 Rudy Vallee, M ss Colbert and McCrea again next Mary Astor and S g Arno

"The Palm Beach Story Paramount Production is the fifth picture entirely written and directed by Preston Sturges

Gerry Jeffers (Claudette Colbert) after five years of marriage to Tom Jeffers (Joel McCrea) decides that they have been leading a rather hum-drum existence so she decides to leave him—tells him he will get along better without her She might be a sister to him she's sure she could help him as a sister

Tom needs $99 000 to build a suspended airport of wire netting that he has invented and she decides to help him get it She goes to Palm Beach by way of the private car of the Ale and Quail Club members who adopt her as their mascot When they start demonstrating their ability by shooting at crackers tossed into the air by a negro porter Gerry gets scared and runs into the general pullman In climbing into a vacant upper berth she steps in the face of John D Hackensacker III (Rudy Vallee) breaking his glasses—and making his acquaintance

They end up on a palatial yacht and she discovers that he is young Hackensacker richest man in the world He confesses he's shy with women looking upon most of them as fortune hunters, and she tells him she is seeking a divorce When he asks if she has a new husband selected she replies "No" that anyone with $99 000 will do John D interprets this to mean that her brute of a husband will sell her for $99 000 and she finds it convenient to let him remain deceived

On the yacht Gerry meets The Princess (Mary Astor) sister of John D seven times married and free again She is trotting around with a little foreigner called Toto (Sig Arno) who throughout the story says only "gritinks "Hello" "Nitz" and "Nitz"

The Princess is wild about Gerry for having made John so romantically human Suddenly as they approach the dock, the Princess sees a good looking man on it It is Tom who has learned of Gerry's whereabouts and has followed her When the boat lands Tom kisses her soundly and Gerry explains by introducing him as her brother Captain McGlue The Princess falls for the Captain in a big way Meantime Gerry is furious with Tom for having followed her She explains that her brother" has an idea for a suspended airport. John D thinks it's a sensation How much will it cost? She nearly says $99 000 —instead says $100 000 John D says it's settled—he'll build one

Meanwhile the babbling Princess tells Tom of Gerry's brute of a husband want



The completed picture combining the two exposures, shows the wedding scene

ing to sell her for $100 000 When Tom gets a chance to dance with Gerry he yelps loudly about this story and quarrels and arguments ensue She argues that she still wishes to call their marriage quits so he asks her for a "fatherly" good night kiss She dares to kiss him

At this instant they are surprised John D outside is serenading her with a full orchestra And that music helps turn the trick in Tom's favor

Next morning she has to confess everything They are still going on being man and wife John D is a good sport He still likes that airport idea and wants to be partners with Tom in building it John D sighs—if only Gerry had a sister She has—a twin sister That's why she and Tom married They're both twins Tom has a twin brother to It's a wedding John D is marrying Gerry's twin sister the Princess Tom's twin brother Gerry and Tom are there The title says And they lived happily ever after And another Or Did They?

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Salon of Nature Photography

Nature in her varied moods will be in the spotlight when the fourth annual salon of nature photography conducted by Hobbies, the Magazine of the Buffalo Museum of Science is hung in the Museum from May 20 through June 16 according to an announcement in the current issue Deadline for print entries is May 13

"In nature photography one may find a new world and the purpose of Hobbies annual salons is to encourage an appreciation of our world both by photographers and by the public and to present the best in nature photography While admittedly the photographer gets the best of the deal —gets the most fun the most knowledge *and if he gets acclaim those who study* the finished prints get much understanding and inspiration

The Jury of Selection will comprise Hillary C Bailey F R P S lecturer Binghamton N Y Wilbur H Porterfeld pictorialist Buffalo and Richard W Westwood editor Nature Magazine Washington D C

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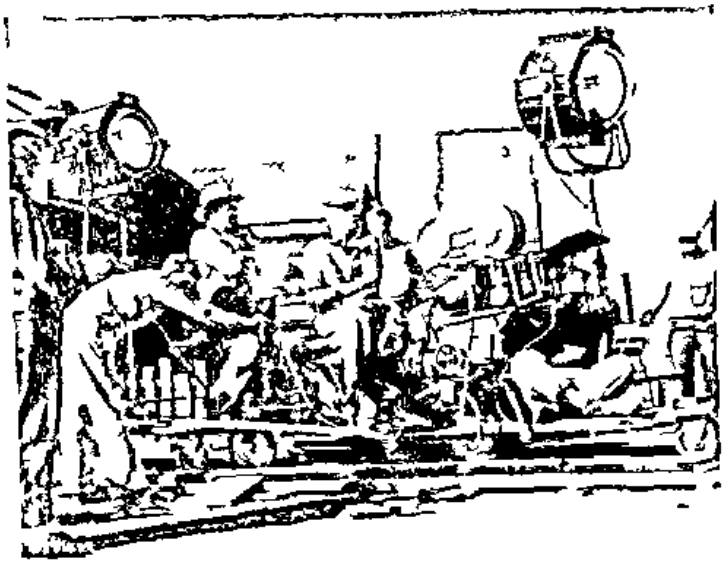
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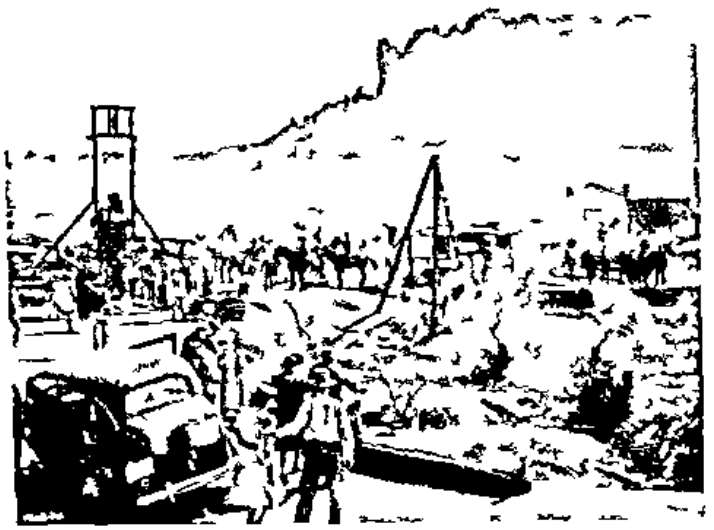
Awards will be made to the first second and third best photographs in the salon and these will be published in the June issue of Hobbies Three awards in each class will also be made All winners will receive a year's subscription

Five classes of subjects are open Mammals (domestic wild tracks) birds and nests plant life (trees shrubs flowers fungi etc) scenery (geological seasonal gardens etc) miscellaneous (fish insects reptiles amphibians clouds frost forms etc)

Full details are available on the entry blank sent upon request to Hobbies Buffalo Museum of Science Buffalo N Y

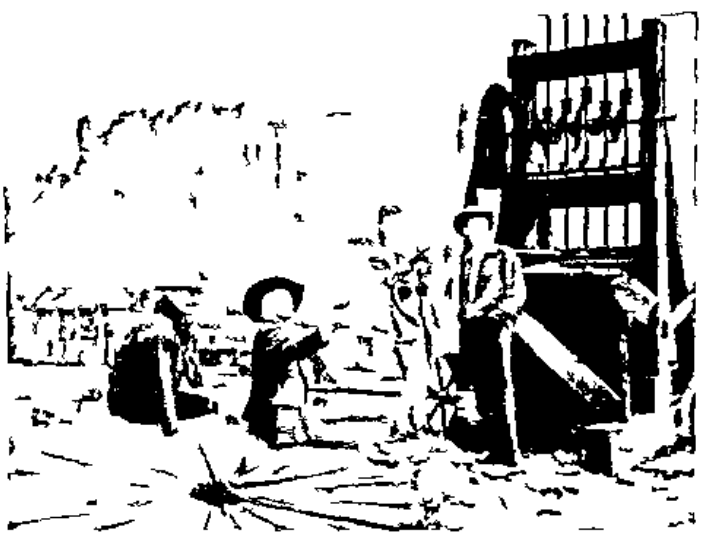










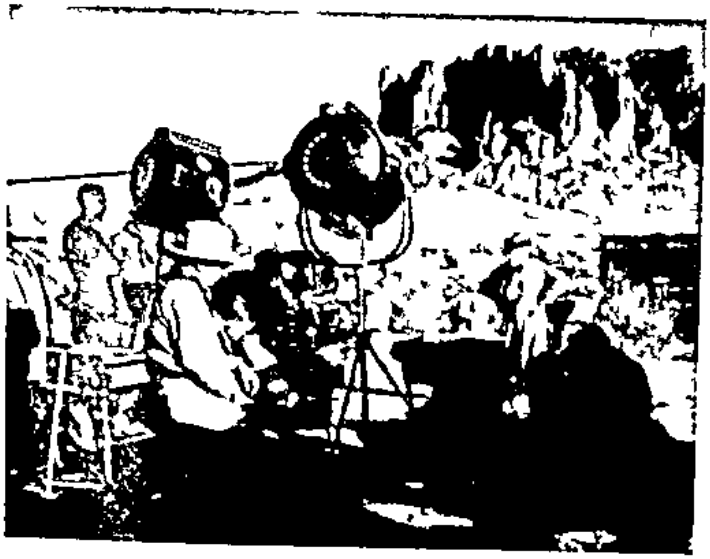


Producer-director Gregory La Cava assistant directors Joseph A McDonough and Les Warner director of photography Hal Mohr operative cameraman Len Powers assistant cameramen Clifton King and Bob Pierce still cameraman Fl Estabrook gaffer Lloyd Hill head grip Walter Wood orth prop man Chuck Fo ler sound recorder Joe Lap s script girl Helen McCaffery

At the offices of the Palmer Foundat on in New York C ty Mr B llingsley (Eugene Pallette) executor of the Palmer estate a ks officials to ass gn a psychiatrist to study Hope Palmer (Irene Dunne) Hope s definitely a screwball on its Blue Book equivalent and he ress to the Palmer for tune which she has squandered

Hope goes to a Fifth Avenue jewelry store to order some diamonds The man

Stills by Ed Estabrook













ager tells her that something in the way of an advance will be necessary She creates a scene and walks out When she attempts to vent her rage on Milton (Harold Albright) her chauffeur he quits and walks away

A young psychiatrist Enright (Patric Knowles) witnesses the scene from the sidewalk and offers to drive Hope home Hope thinks that Enright is a prospect for the vacant chauffeur's job and he agreeably assumes the role

Hope and Enright set out for the West in a second hand car to visit her grandmother Cactus Kate (Queenie Vassar) The latter said to have untold caches of gold throughout the Arizona desert, has always held her Eastern relatives in contempt She refuses to give Hope money but invites Hope and Enright to work an abandoned gold mine in which Hope is

Lady in a Jam" Universal Production

Starring Irene Dunne and Patric Knowles













ent tled to an nterest.

Hope and Enr ght tart to work the m ne but there s no gold Pursu ng his secret ps h atrical study of Hope Enr ht feels that she mu t ach eve some "victory to set her ri ht mentall So he salts the mine and Hope str kes gold

To the utter del ght of Kate and the discomfiture of Enr ght, a phoney gold ru h starts Among the hundreds who turn up in the rush is Stanley (Ralph Bellamy) a corny cowboy to whom Hope attaches herself n an attempt to make Enr ght jealous Her plan fa ls, however and Stan ley d ops his nterest in Hope when he













finds out she is not really wealth)

When government men decide to assay the mine Enright spirits Hope away to avoid possible prosecution for starting the fake gold rush The government men find not gold but they do find valuable deposits of mercury ore so Miss Palmer s again rich Hope and Enright return to New York City where she plans to use her new found wealth to gain revenge on Billingsley and her former society friends

Hope goes to the Foundation where she asks officials to psychoanalyze Enright She is still puzzled by his aloof attitude Mean

(Continued on Page 18)

St ll by Earl C o ley



Art ur Lake Penny S ngleton and Larry [illegible] S mms—better known as Dagwood Blond e [illegible] an I Alexander



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Hollywood studios' still show



Arthur Miller and Joan Fontaine congratulate each other on "This Above All" set at Twentieth Century Fox after winning Academy awards

(Continued from Page 15)

time in another office Enright reports to his superiors that Hope is a hopeless case which he wants taken off his hands Officials comply Enright is so relieved that when he walks out and meets Hope she can see a change in him already Well it doesn't take a psychoanalyst to determine that they are in love They find that out too

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The Second Annual Hollywood Studios' Still Photography Show, sponsored by the Academy of Motion Picture Arts and Sciences will be held May the 6th 7th and 8th Location of the exhibit has not yet been definitely decided upon

Following are the classifications in which awards will be given

1 Best Portrait, (a) Male (b) Female (c) Of more than one person

2 Best Character Study, judged on portrayal of role rather than on the player's natural self

3 Best Posed Production Still (a) In a studio made with studio control of conditions and lighting (b) Made out doors with predominately natural light

4 Best Action Production Still (a) Made in studio with studio control of lighting and conditions (b) Made out doors with predominately natural light

5 Best Glamor Picture full or three-quarter length not essentially a fashion study

6 Best Candid Shot made with any type camera the classification to be determined by treatment.

7 Best Novelty Picture, including montages trick lighting novelty enlargements and effects

8 Best Fashion Study judged on illustrative quality composition and general appeal type of wearing apparel not considered

9 Best Spot News Picture, must be accompanied by descriptive caption of not more than ten words and to be judged on basis of news value at time of release

10 Best Color Transparency to be judged on basis of reproduction quality as well as general excellence

11 Grand Prize for 'Best of Show' print, shall be given to the photographer of the entry which receives the highest number of points in the vote of the judges.

12 The John LeRoy Johnston Trophy for Most Popular Picture in the Show,' shall be given to the photographer of the picture receiving the most votes in a ballot to be conducted among those who attend the Hollywood Show

Eligibility rules Entries of still pictures shall be limited to those submitted by cameramen who between March 1 1941 and March 1, 1942 were employed by any producer of motion pictures whose studios are located in Southern California and such still pictures must have been made in connection with such employment Only stills which have been regularly approved by the Production Code Authority will be accepted Entries will be accepted both from photographers as individuals and from studio photographic departments

Method of submitting prints This year studio departments and individual still



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VICTOR JURGENS, staff cameraman for *March of Time* with his Eyemo Model L in the Dutch East Indies. Jurgens spent more than two years and traveled more than 30 000 miles in the Far East producing about 40 000 feet of negative *March of Time's* Battlefields of the Pacific was cut from this negative

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By G. E. RICHARDSON



men will submit prints in the various classifications they select. All the prints submitted will then be examined by a special classification committee which will decide the classification and also will decide which prints are not of high enough quality to be accepted. Not more than 350 prints will be finally accepted for competition this year. The entire show will be limited to this number as a maximum for judging and exhibition. In submitting prints for decision on acceptance only one unmounted 8x10 glossy will be required. All submission prints of all entries must be received at the Academy office by noon of Saturday, April 11 1942. A classification committee composed of a representative of each studio employed in the handling of still pictures together with Herbert Aller business agent of the still photographers union will the next day examine all prints and shall pass upon them as to proper classification as well as decide whether they are acceptable for exhibition. All cameramen submitting prints are asked to indicate what classification they think the prints belong in. This will assist the classification committee.

On Monday April 13 all entrants of prints will be notified of all accepted pictures. Entrants shall then submit 12 uniform glossy 8x10 prints of each entry not later than by noon Saturday April 18 1942. These will be used as judging prints.

Prints to be hung in the exhibit shall be mounted on 15x20 cardboard mounts. Enlargements shall not be less than 11x14. Enlargements to full 16x20 are recommended when practical.

There will be no admission charge to the show this year, the general public and all studio personnel being invited to attend free. Announcement of a nation wide committee of twenty judges will be made shortly.

The prize winning prints and 100 others that were in last years still show are now being exhibited in Australia, Russia and South America. The entire last years exhibit was shown for a month in the Museum of Modern Art in New York, the first time this institution has recognized Hollywood's still photographers.

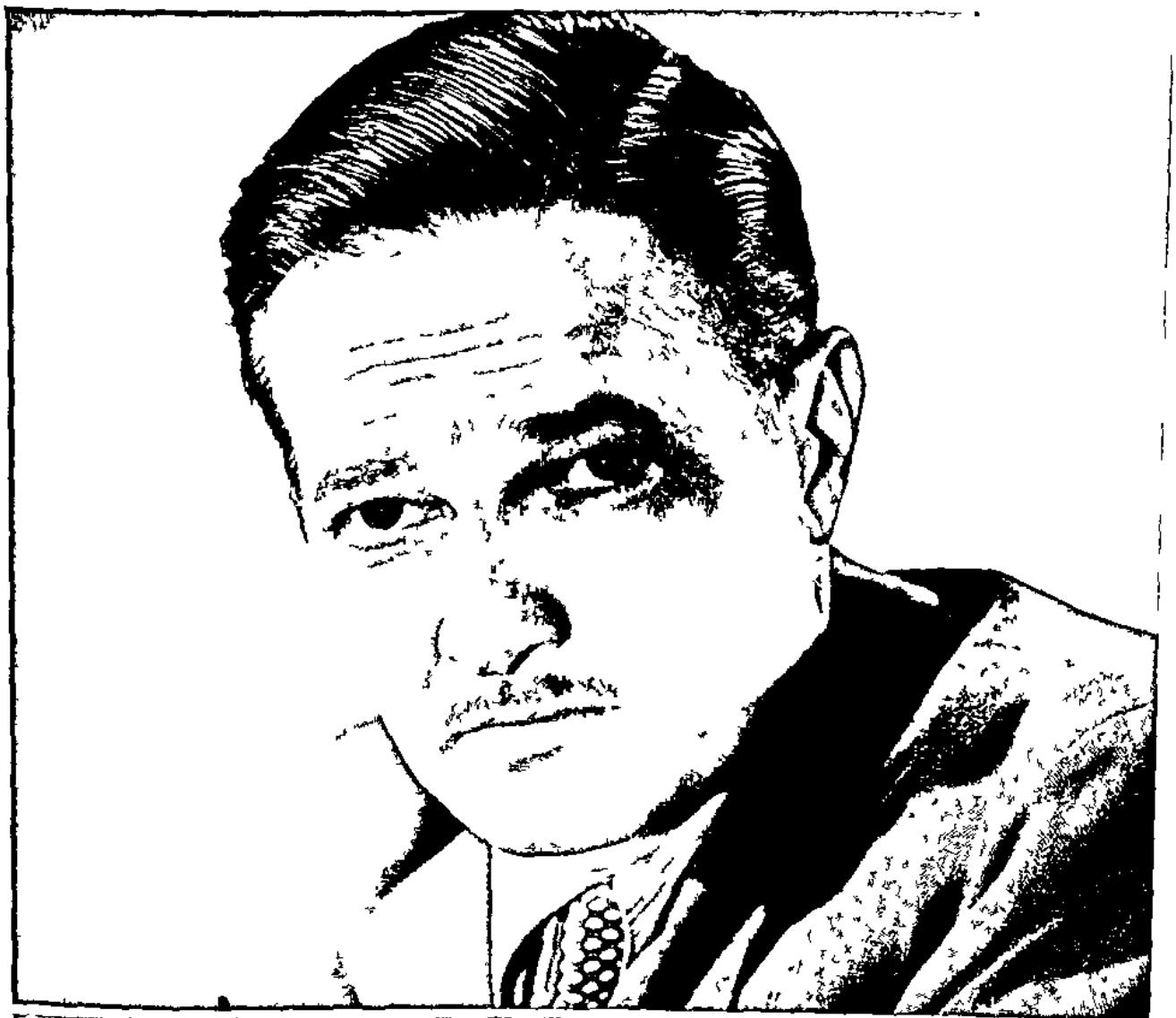
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MAN'S WORLD

(Continued from Page 8)

Senor Gonzales—just as a starter, I oss!

And that s just how King Arthur came back to Camelot on the Hudson

Well with that in the l ag King and me soon headed for l eMaire s and on the way over he asked me how was every little thing—meaning my two kids and the wife, who is only five foot two—and finally he winds up with Hey! Who was that pansy cameraman with the bunch down on the Gonzales story?

'That was no pansy Mr Bones I said giving the old gag a new twist That was a LADY!

A Lady?"

That s right I assured him a dame! And believe it or not shes a newsreel cameraman!

"Well I'll be— he I ll beed Say what in hell s this business coming to?

You see the dame might have looked like an effeminate guy to anyone who didn t know her because on assignments she wore slacks a leather jacket her hair tucked under a beret and dark glasses

I could see that things were buzzing around in King Arthur s crown Will she be over here at LeMaire s? At our Round Table with the rest of the gang?

Just as like as not I told him

But I was wrong Tomboy Smith never showed up which was mighty strange since she had l eard such glamorous stories about our absent king but it developed that she had a good reason for not show ing You see when the rest of the hood winked mob learned of the gag aboard ship that Gonzales cross up by King they threw their exposed film away All but this Tomboy Smith She was the only one who realized that she had a good news picture and an exclusive at that of King Arthur s return to America which proved to be more important news than the arrival of the South American big shot! And she made unusual commerce of it getting a *last laugh at that—by sell ng it to our own* reel at a fairly fancy price!

All of which made King Arthur more eager than ever to meet this upstart floozie as he called her

Now the plot thickened Next day King Arthur was booked on to one of tl ose *Voice of the People I W as Th ere* radio programs and over at the broadcasting station wl o should he run into but Gwen Smythe a girl he knew casually and who had been and still was as far as l e was concerned a society and fashion still pho tographer He had met her once on a story at Newport or Tuxedo Park or Miami or something and she was lovely then—but tonight she was more gorgeous than ever and King Arthur decided to do a ro mantic something about it He looked good to Gwen too l ecause now he was clean shaven and dressed in fine clothes

Yes, that s rigl t—this was the same girl as she who answered to the name of Tom boy Smith the lady newsreel man But King didn t know that and she di In t tell him either

Well a romance started then and there although we di In t none of us knew it at the time between The King and The Tom Boy although he knew this new sweetie pie as Gwen Smythe a gorgeous dish He never susj ected her or associated her in the remotest way with the Ugly Duckling of the men's pants and dark glasses that had the audacity to comp ete with guys like him on newsreels hunts

King met the tomlo y newsreeler on a story a few days later—and a go odly crowd was there—but instead of blowing up and chewing her head off he didn t say a word In fact he tended to his own business and avoided her—although he subtly threw a monkey wrench into her machinery whenever he had the opportun ity But the reason he didn t have truck with her and tell her off—which I learned later because The King and me are pals—was because this Gwen Smythe, which he was courtin' at nights when he wasn t working told him not to So he didn t

Well—wasn t that a funny one for the book!

Now, naturally Tomboy Smith didn't show up anymore at LeMaire s and we wondered why but that was her privilege and frankly King liked it better

Alas however a good thing can t last forever! King Arthur learned of this Jekyll and Hyde act of Gwen s when he called at her apartment one night much earlier than his date was for He caught her with her hair down—or up as you will—and she hadn t had time to shed her tell tale newsreel garb

Let s shy clear of bloodshed cause there wasn t any but they had an argun ent that was a pip And don t forget King was having it out with two people—the girl he loved as Gwen Smythe and a dame called Tomboy Smith who he *resented* but ting into his man s world

King Arthur stomped out with armor clanking because she didn t wilt or back an inch She proved tl at she had just as much temper as l e had

They didn t see or talk to or about each other in any manner shape or form for nearly two weeks and it was right about then that the rest of us learned that Gwen and The Tomboy were one and the same

But the two were really stuck for each other—win lose or draw—and you could see that King Arthur although he d have slugged anyone who said so was carrying more than a small sized torch He wasn t good for much it showed in his work—or rather lack of work—and I can t say that her efforts in the newsreel biz were any too hot, either

Well they finally crossed paths again and I kinda made up When I say "made up I mean it this way They made a deal—if you want to call it that—although it was really his deal and her s to accept or reject I know all this l ecause I was present that night As a matter of fact it was mostly me and my wife in the roles of mediators that I rought them two l ack together again—and for their own mutual good Not that I ever considered myself a stand in for Cupid I ut I hated to see a good man go wrong—and a sweet girl go unhappy

Their strange pact was this When out on a job each would give or take no quar ter from the other King contended that Gwen was monkeying around in a man s private world, and she'd have to expect to be treated like one, not trade on her sex or the fact that he loved her devotedly after hours If at the end of six months from date, she had "cut the mustard" and achieved something outstanding in her pur suit of newsreel clips—and the rest of the gang were to be the judges—all well and good She could continue as she wished and King would take his bitter medicine like a man But if she didn t click—and he insisted that he wasn t going to help her to—then she was to take her medicine l ke a woman quit the business cold and be come the willing l ride of The King

It was a deal—all set, signed and deli vered—and Pop LeMaire set the drinks up and we all drank on it In fact most of us got gloriously stiff, yours truly included

Boy ain t the whole set up ludicrous? At night after work was done they got to gether like a couple of lovebirds In fact they made a couple like Romeo and Juliet resemble a pair of Kilkenny cats But dur ing their workaday—when they d meet on the common ground of some unexclusive newsreel story—they made a couple of Kil kenny cats look like Romeo and Juliet No foolin, they were a male and female version of Captain Flagg and Sergeant Quirt!

Oh the en ls they went to to put it over *on each other!* But no matter how things had gone along between them during their dog eat dog daytime they got together at n ght and never indulged in any carry over post mortems They were a completely d f ferent couple

I ll never forget the time they both checked in to the same hotel conveniently near the scene of a story set for the fol lowing morning But it was one of those outdoor stories that would only come off if the next day was bright and clear If it rained—no soap

Well came morning and King Arthur woke up and looked out the windo v at what kind of day it was It was pouring down in buckets full That was all the sleepy k ng wanted to know without get

ting out of bed, he turned over and went back into a swell morning's sleep. But was he a muchly chagrined fellow when he found out—hours later and too late to get in on the story—that the rain which raced down past his hotel window was manufactured by the Tomboy. You see, as I understand it, she took the room above him and had managed to create a tobogganing sluiceway out of the bathtub shower curtain which was long enough to trail out the window. Thus, when the shower was turned on full, water cascaded down and out the window to give the appearance of rain as seen from the sleepy King Arthur's bed! . .

His Majesty took it all in good stride—all fair in love and war, or something—but he lost no undue time in trying to even the score. Which he did like this. He caused her to fall heir to a hot tip that a great ship was aground a few hundred miles down the coast. Well, saying nothing to nobody, away she went on a wild goose chase.

There wasn't any ship aground but while there, the newsreel girl ran smack-dab into a labor riot at the wharf and came back to New York with a far greater story than she had figured on.

When King Arthur heard how his little double-cross had boomeranged, he was fit to be tied!

But some of us could have suspected something like that to happen because it was King Arthur who was responsible for her going off on that chase. You see, King Arthur was a news magnet, which was one of the reasons he goes off on these foreign assignments and the big stuff. Wherever The King sets his foot, things might be quiet but in no time something of newsreel importance will be found to happen right in front of his lens. It's a fact. I've seen it happen more times than many.

A short while after, though, he got even with Gwen when everybody was down South on a flood story. He intercepted a chartered flier who had flown down to pick up her films and fly back with them to her home office. The King impersonated a stooge of hers and gave the unsuspecting flier a package from Miss Smith and told him to get going into the skies with it before the competitors beat him to it.

The flier got going with the precious package headed for the company's dark rooms in Manhattan. But the package he carried proved to be—under the red light of a dark room—not the negatives of a flood story but a bunch of cheese sandwiches done up in a taped film can!

Thus it went, nip and tuck between the two of them in this strange battle of wits.

Now, if you remember, King Arthur had unceremoniously albeit dramatically pulled out of Germany with those forbidden still pictures—those Masterpieces in Murder—which you've possibly seen some of in mags like Life, Look and Pix. All of which Schigelgruber and his mob didn't like a bit. So it came to pass that some of Der Fuhrer's special agents in America were given the word to liquidate our good King Arthur. Which might have succeeded 'cause they're a crafty bunch of cut throats. But none other than The Tomboy who gets around uncovered the plot and immediately proceeded to show what kind of stuff she really was made of.

At this point I'm not in a position to divulge the details of the case en toto since it called for the cooperation of the G Men, and the F B I succeeded in going to town and clapping all of the conspirators into the clink, and the modus operandi is one of your Uncle Sammy's secrets, since we've still got other infiltrating vermin to clean out in the same way.

This much I can tell you. The Tomboy put her life in jeopardy by going to her boy friend's aid. But she came out of it fine, with the two fisted King Arthur right in on the kill along with some of Hoover's honeys.

Well, all of this happened late last fall which was right at the end of that six month's pact I told you about. So it wasn't but a matter of days before The King and The Tomboy were haled before the happy jury made up of us roughneck newsreelers.

We were as impartial and as fair as that blindfolded sweetheart called Lady Justice. There was no denying that Tomboy Smith had just in the saving of King Arthur's life, done far more than an outstanding achievement in her work. To which the proud King Arthur was more than ready to agree. Tomboy had won her spurs in a man's world, and there was nothing to do but dub her a full Knight of our Round Table. But Tomboy, very happy that she was voted in, declined all honors with thanks. She intimated in a very pretty little speech that her love for King Arthur was far greater than her love for further newsreel dangers.

"After all," she concluded looking up at her king, "Yours is a man's world and I'm just a woman—a woman in love—and that gentlemen—is exclusively a woman's world!"

And so they were married and King Arthur was given a couple of months off to honeymoon with his Queen in Hawaii. After an all night wedding binge we all went down to see the happiest couple in the world off on the boat. We noticed that the King had an Evemo with him, but only to make honeymoon pictures, he said. Something to show our grandchildren, she added. Yep, that was all. The King insisted that he was going to forget all about chasing for the newsreels until the honeymoon was over.

Well, here's the pay-off. Remember how I told you King Arthur always happened to be where important news happened? Well—they were standing at ship's rail under an intoxicating full moon on the Pacific when she said, "Well, darling—the captain tells me we'll be in Pearl Harbor tomorrow morning."

"Yep, that's right, honey—far away from the madding throng. What is tomorrow, anyway?"

She laughingly chided him. "You're starting off like a real old married man, darling. But leave it to a wife to remember dates—especially if they mean anything special in her life. Tomorrow, my love—is Sunday, December 7th, 1941".

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With all photographic equipment becoming increasingly difficult to obtain Bell & Howell has taken what seems to us a wise step in making it easy and inexpensive for the FILMO owner to take the best possible care of his present camera and projector Conservation of what we have is the order of the day, and the makers of FILMO have inaugurated a low-cost flat rate service system which might well be emulated by other manufacturers

"We have always built extra years of service into our equipment" says Bell & Howell "and we believe that the present emergency is going to prove conclusively the value of that policy However any mechanical device is subject to occasional need for service, and however infrequent the need for that service, we have made it possible by streamlining charges and methods, for the FILMO owner to get it quickly and at low cost

The new Bell & Howell flat rate service charges apply to all models of FILMO 8mm and 16mm cameras and projectors and to FILMOSOUNDS and by going to his dealer the FILMO owner can determine in a minute just what service is going to cost him

"Furthermore Bell & Howell goes on to say the owner has his choice of several standardized service levels —all the way from simple cleaning adjusting and lubricating to complete overhauling"

Bell & Howell states that this 'mass production of service with its corollary lowering of prices involves no lowering of the company's standards of precision and quality work It has been inaugurated says the company as a timely and economical service to FILMO owners

For further information see your FILMO dealer or write to Bell & Howell Company 1801 Larchmont Avenue Chicago Illinois

News from Kalart

The Eastman Kodak Medalist camera can be synchronized with the Kalart Automatic Speed Flash for use with all bulbs The Automatic Speed Flash makes an ideal companion for this new American precision camera No special adapters are required although it is recommended that an extension bracket be used in connection with this camera

A special flashing unit for use with the Brownie Reflex (Synchro Model) has been announced by the Kalart Company The popular Kalart Compak Battery Case and Extension Bracket, together with a Connecting Cord are supplied One end of the cord attaches directly to the camera and the other is attached to the Battery Case Price of the flash outfit is $6 75

This unit uses only midget bayonet base bulbs The Kalart Standard or Master Battery Case may also be used by means of the same Connecting Cord Further details may be secured from your photo dealer or by writing the Kalart Company Stamford Conn

"Moviquiz" Gaining in Popularity

From the Bell & Howell FILMOSOUND Library comes word that Moviquiz the new test your knowledge film game is steadily gaining in popularity In Moviquiz, the ask me technique, so popular on the radio, is applied in a really novel way to 16mm rental films It is claimed that the game provides fun and educational amusement at home movie parties and that it stimulates the powers of observation and retention when it is used as an adjunct to educational films at school

Moviquiz is played thus says Bell & Howell the participant—student at school or guest at a party — is given a printed sheet of questions, and is asked to indicate the answers in the spaces provided A film is then shown in which the correct answers are found, and from then on the grading of papers rewriting of answers or paying of forfeits is up to the teacher or host as the case may be

Two distinct applications of Moviquiz have been provided, says Bell & Howell—for educational use in schools and for entertainment at home—and at attractive, descriptive folder on each phase may be obtained simply by writing the Bell & Howell Company 1801 Larchmont Ave Chicago

Rear Projection Screen

By Katharine A Kelly

The first transparency screen used for projection backgrounds was a heavy plain glass sandblasted or etched for diffusion The glass screens have many faults Besides being very dangerous easy to break and cumbersome their main trouble is the Hot Spot which is caused by the falling off of the light The falling off of light is from 40 per cent to 65 percent from center to edge on a 12 feet by 18 feet glass screen which makes it objectionable for rear projection use Due to heavy grain and refraction of light, there is great loss of half tones and poor definition when glass screens are used

It was Bernard M Bodde who conceived the idea that something should be done to remedy this condition and the result was the Rear Projection Process Screen now known as the Flat Light Screen used in nearly every country today

The present Flat Light Screen is the result of twelve years of continuous research on the part of Mr Bodde It is a seamless plastic screen made of Safti Cell Rose a tough and flexible material which is flame proof It is easily rolled for shipment and if by chance it becomes soiled the screen may be washed with soap and water without damaging the finished surface

From the camera side the screen will produce a cold light owing to the fact that the crystals on the screen will split each light ray passing through into as many rays from the center to the edge as we desire to get The result is no grain clear definition, and the picture is not affected by leak light from the camera side Brilliancy and definition of the picture on the screen is accomplished in the finishing process which consists of application of crystals giving a polarized effect This polarization enables the screen to withstand a tremendous amount of foreground lighting without 'washing out' the picture This process also eliminates the grain The finished screens are balanced as carefully and precisely as a camera lens, in fact they are really a secondary lens

Several types of screens are manufactured for specific purposes—such as incandescent or carbon projection They come in black, white and several colors All screens are seamless and can be made up in any size up to 45 by 75 feet

The primary use of the Flat Light Screen was the necessity of background projections for composite shots both in still and motion picture photography Later however many other uses for the screen in large and small sizes were discovered Television experimentors have found the screens more than satisfy for their various types of equipment

Mills Bros organization who make the Panoram 16 mm juke boxes and motion pictures for entertainment purposes use these screens exclusively The screens made for these boxes give a definite illusion of depth with a very nice picture when viewed from all angles

Flat Light screens are successfully used with continuous projection for educational purposes also for advertising displays in connection with a continuous slide or film projector The results are sharper detail with a third dimensional effect that makes the viewing of black and white or color slides or film more effective and thus more profitable to the exhibitor

Dual personality shots pictorial backgrounds for titles and special effects work, may be accomplished with remarkable results

The screen is a valuable accessory also to the amateur and professional photographer for backgrounds for table top and miniature photography

The Flat Light Screens are manufactured and sold by the Plas Tex Corporation of Hollywood with which company Mr Bodde is now connected

PATENTS

By ROBERT W FULWIDER, *Patent Attorney, Los Angeles*

No 2 269 481—Production of Colored Photographic Images *John H Reindorp Eng* assignor to Ilford Ltd Eng Appln July 21 1939 13 claims

A color forming developer comprising an aromatic amino compound

No 2 269 723—Photographic Exposure Meter. *Felix Lerin* assignor to Research Engr Corp Appln May 9 1939 8 claims

An exposure meter having a combined visual reflected and transmitted light comparison field and other parts whereby the exposure time is given for a paper of a given speed

No 2,2 0 0,0 0 — Color Photography Method and Apparatus *Samuel B Grimson* assignor to Color Research Corp Appln July 17 1940 5 claims

A method of illuminating in colors a black and white negative bearing color separation images which employs a diffraction grating a banded tri-color filter and a collimating lens

No 2,2 0 0 118—Production of Colored Photographic Pictures *Bela Gaspar*, assignor to Chromogen Inc Appln Dec 13 193, 40 claims

A color process using an emulsion predyed with an azo-dye and having a silver image therein which selectively destroys the dye by reduction

No 2 268 389—Flash Lamp Attachment for Cameras *George F Boesser* Appln Dec 1o 1939 2 claims

A detachable flash lamp unit for still cameras having a collapsible reflector

No 2,268,503—Toning Photographic Material. *Garnet Philip Ham* assignor to American Cyanamid Co Appln Dec 8 1939 8 claims

A method of toning images which uses sodium diamminoamidine ferricyanide and a metal salt

No 2,268,630—Color Photography *Gustav Wilmanns et al* Germany assignor to Gen Aniline Appln Jan 6, 1938. 3 claims

A process of color photography using plural emulsion film containing dyestuffs and treating with color developers having the property of shifting color values to correct color strains.

No 2,268 791—Color Correction *John A C Yule* assignor to Eastman Kodak Co Appln April 30 1940 o claims

A process for making a colored positive which comprises making a pair of color separation negatives making a positive from the second negative and making a positive from the first negative masked by the other positive

No 2 269 161—Color Photography *Richard S Morse* assignor to Eastman Kodak Appln May 18, 1938 22 claims

A method of printing a colored film which includes balancing printing lights against a photograph of light of known spectral distribution

No 2,267 791—Shutter Mechanism for Cameras *Willo A Aosken* assignor to Universal Camera Corp Appln June 21 1940 9 claims

A shutter mechanism having a mask slide and an exposure slide movable with respect to each other for effecting an exposure of pre-determined duration

No 2,267,832—Lens System *Eduard L McCarthy* assignor to Perkin Elmer Corp Appln July 30 1940 12 claims.

A lens system comprising a congent front element and a convergent rear element axially spaced therefrom, said rear element being a triplet composed of three cemented lenses each having a single flat refracting surface the other refracting surfaces of said element being spherical

No 2 268 238—Color Viewing Device. *Maurice C Bell* assignor to Pittsburgh Plate Glass Co Appln Oct 30 1940 2 claims

A color viewing device comprising a colored body in plate form having adjacent defined sections each of uniform thickness, said sections being of different thickness from one another and being optically distinguishable

No 2 268 322—Method of Positive Printing in Color Photography *Edwin Hesser, et al* assignors to Photocolor Corp Appln Aug 24 1938 22 claims

A color process for positives which uses an iodide and uranium mordant to form a brownish key image and then treating with yellow and magenta dyes to get a final image in brown yellow and magenta.



Left Rough Riders Buck Jones, Tim McCoy and Raymond Hatton starring in "Forbidden Trails," Monogram Production Right Buck Jones and his favorite steed Silver Stills by Warner "Bill" Crosby

The screen s wonder horse Silver helps his master Buck Jones out of man tough spots in this latest melodrama of the range Scott R Dunlap was the producer and Robert N Bradbury directed

Stills by Warner "Bill" Crosby "Forbidden Trails," Monogram Production





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Gil Perkins and Harvey Perry two of Hollywood s ace stunt men walked into a local insurance office here the other day and a ked what it would cost to insure themselves against injury to the extent of $1 000 each in a proposed collision between Army jeeps for a new movie

So you boys want to fix your salaries again hey?" said the agent Well I don t mind I d charge you $500 premium"

"Thanks," they chorussed and walked out without the insurance But $500 is what they charged (and received) for the collision when they staged it before RKO Radio cameras in "Call Out the Marines

That method of fixing a price for the perilous stunts they perform in the movies is standard practise nowadays among the stunt men and women

It came into existence some years ago when a representative of their fraternal society the Little Cousins was delegated to approach Lloyds of London on the subject of group insurance Told such insurance would cost $36 a year per $1 000 per person they abandoned the idea However they decided in future to charge the equivalent of such a premium for their services.

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SUPERIOR 1. (Type 104) Fine grain makes this film ideally suited for taking background negatives and for general outdoor use. It has a moderate speed and requires normal development

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INTERNATIONAL photographer

Vol. XIV May, 1942 No. 4

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Editor, HERBERT ALLEN

Business Manager, HELEN BOYCE. *Art Editor*, JOHN CORYDON HILL.

Contributing Editors D. K. ALLISON, GEORGE HURRELL, CHARLES SAXTON, ROMAN FREULICH, ERNEST BACHRACH, ALVIN WYCKOFF, WILLIAM V. DRAPER, FRED GATELY, GEORGE SCHEIBE

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Michele Morgan

THE X-RAY IN MOTION PICTURES

By Jerry Fairbanks, President, Scientific Films, Inc

During many years of experimentation and research the possibility of making X Ray motion pictures has been scientific ally explored but without satisfactory re sults A variety of problems interposed and seemingly presented insuperable d ffi culties Experimenters were about con vinced that while animated films of X Rays d sclosures was theoretically possible physical difficult es were too numerous to permit the making of such a film practical

About tv o years ago I was privileged to be present at a motion picture showing before a medical group Among the pic tures screened was a 16 mm film made in Germany on motion picture X Rays While the quality was poor and the indi vidual scenes apparently made up by re-peating a short strip of film many times the idea was so startling that I immediately visual zed what a wonderful subject it would make for our *Popular Science* reel that we produce for Paramount Pic tures

Research disclosed that the X Ray mo tion pictures I had seen were the best to date Attempts had even been made to utilize the standard 11 by 14 X Ray film by constructing a motion picture camera big enough to take this film This appara tus made the old Grandeur Cameras look l ke an 8 mm Univex This was called the direct method whereby the patient s torso was placed as close to the n oving f lm as possible with the X Ray tube on the other side for penetration This elimi nated an optical system but the apparatus v as so bulky that only med ocre and jerky results were obtained

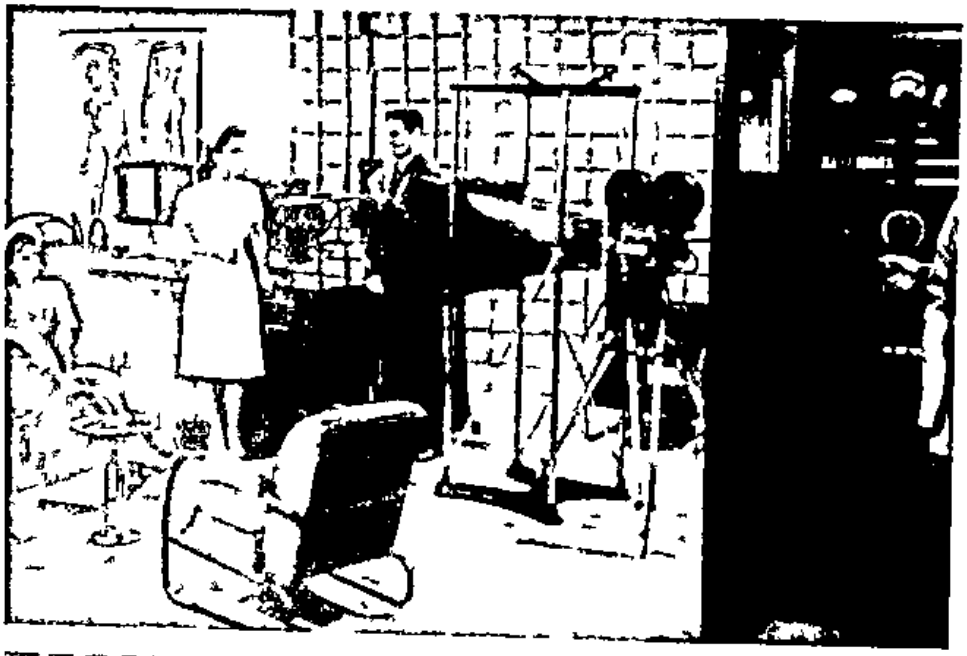
In the optical method of photographing the X Ray image upon a fluorescent screen the problem of exposure became apparent I discovered that the German films were photographed with a special lens made by Carl Zeiss of 50 mm focus and with a speed of f 085 which is some speed I also d scovered that there was only one of these lenses made and it was in Ger many After much correspondence and a couple of trips to Rochester it was decided that we could do anything the Germans could do perhaps a little better

The General Electric X Ray Corporation offered their cooperation by supplying the most powerful apparatus as well as in valuable technical ass stance

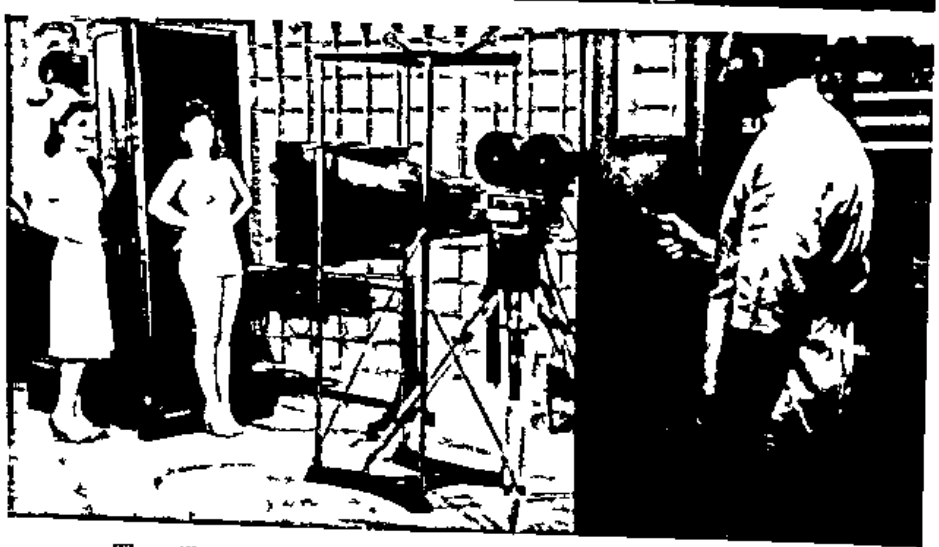
The main problems to be overcome were exposure and tube life The f rst was ac



At the left are the un glamorous but very important pictures from the X Ray Camera and at the right are the subjects as they posed







These illustrations show how subjects are posed for the mot on picture X Ray Camera The man in the white coat is Arthur Henkel expert technician from General Electric X Ray Corporation

complished by opticoating the fastest 50 mm lens available that would cover a 35 mm frame The original thought was to use 16 mm, as much faster optics were obtainable to cover the smaller field The grain size encountered due to the speed of the film however, made it impractical when enlarged to 35 mm

Eastman Kodak supplied us with a special 35 mm X Ray emulsion spooled to motion picture lengths The intensity of light necessary to film the active images exposed by the X Ray, produced an intensity of heat so great that the tube across which the electrodes flowed collapsed The problem was much like that which for so long a time prevented entymological movies until a so-called "cool light" was developed which didn't destroy the highly magnified insects subjected to picturization

The solution of this highly technical problem is the recently perfected rotating anode tube Electrodes flowing across this newly created revolving anode tube are focused at an extremely high current reaching a power of 100 000 volts and 500 milliamps This tube could sustain terrific electrode intensity, though but for a few seconds at a time To extend this period of time long enough to make motion pictures was solved by an ingenious mechanism designed and built in our shop It essentially consists of a circuit breaker operating in a vacuum in order to eliminate arcing when the high frequency circuit was made and broken This circuit breaker was synchronized with the camera so that the X Ray tube was cut off and could rest during the period of film movement This enabled the tube to supply a much higher radiation over a longer period of time Special lead lined containers protected the exposed and unexposed film

These were not the only problems confronted but they are the major ones the solution to which has made possible a clear detailed and permanent record in film of what the Peeping Tom of X Ray sees And what it sees promises no less than a revolution in the study of anatomy metabolism and related science Instead of the usual images of X Ray subjects—lifeless and still—the surgeon and physician are able to study the organs of the body as they go about their regular business

The current release of our *"Popular Science"* reel shows these amazing findings of the moving X Ray The symmetry of a silken knee is shown to be something more than the harmonious relations of line and form Beneath the pleasing exterior lies a complex articulation revealed in action—a hinged joint of such power as is entirely disproportionate to the size and weight of the shapely leg The patella or knee cap is shown as it seems to float freely in response to muscles capable of exerting a pulling power of 800 pounds or even more

Right through leather sock and flesh

THE BIGGEST LITTLE LAB.

By "The Biggest Little Lab" we mean that of Larry Kronquist (the name somewhat resembles "conquest") and though a young man Larry's life has been one conquest after another. Our February issue carried something about this popular young Douglas airplane photographer and we promised to follow with information about his lab. It was only the other day that we were able to corner Larry long enough to get some pictures, made by himself for INTERNATIONAL PHOTOGRAPHER.

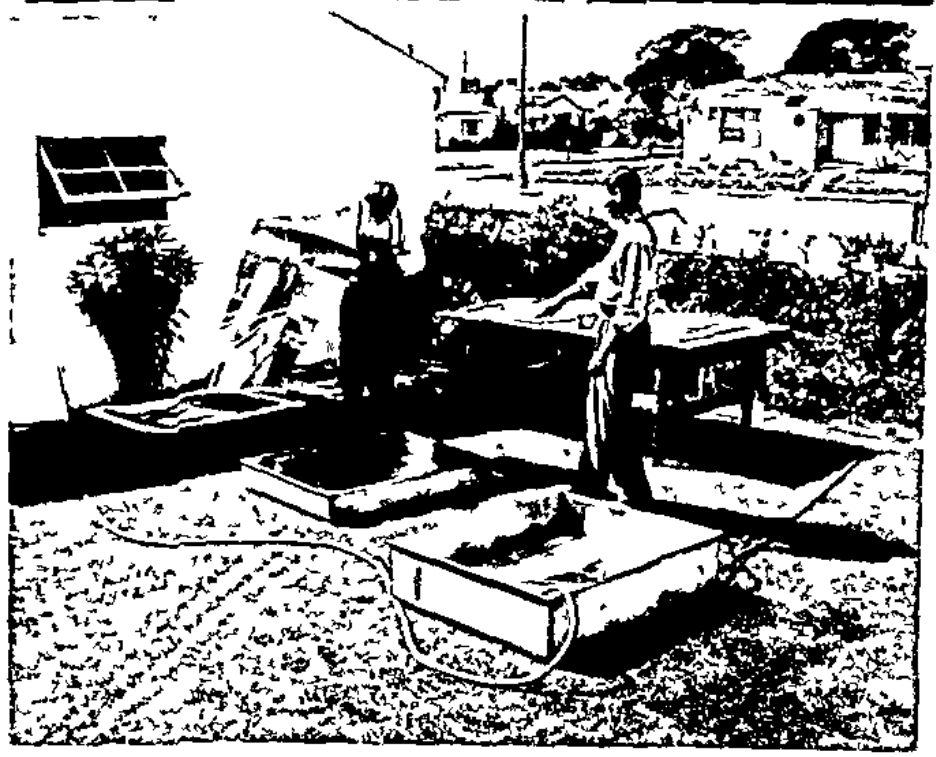
Above we mention "popular young airplane photographer." Larry doesn't seem to know it. He's just a modest pleasant fellow surprised at every good thing that has come his way. He started as an artist and has done newspaper and commercial work. The commercial work gave him a sales angle overlooked by many an artist. In showing some of his earlier paintings he casually remarked, "This was made just before I hitchhiked to Chicago to get back to the Chicago Art School," or "I painted this after I got back to Chicago—during the time I traded pictures for hamburgers."

Ideas were the one thing that Larry never ran out of—that and his belief that somehow he would some day "deliver the bacon." It was one of these ideas that earlier in his career started him on a long trip up into the mountains where he camped for days. He wanted to make some pictures of a tunnel for a railroad company. So the railroad company didn't commission him to do it—Larry just didn't like the idea of not showing pictures of it in their advertising. They said a lot about it—but words aren't proof of anything. Pictures are!

When a fellow is bursting with a big idea it's funny how ornery the weather can be. It just wouldn't cooperate with Larry at all. It showed resentment. It was rainy, drizzly, cold—and if you think it can't be cold in a tent in the mountains just try it sometime. But finally it cleared enough so Larry shot his pictures. They didn't please him, but they were the best he could do at the time. Maybe they'd give the railroad company an idea of what he had in mind and they'd ask him to go back later and try again. The end of this sequence is that the railroad company grabbed the pictures and handed him a check for $150. Gosh! Larry hung on to a desk to sort of anchor his feet and finally gave up and floated out on some invisible wings tied to his shoe laces. That's the way it felt anyway. Did he need that $150? Not that he was in debt, but it would tide him over until he could execute some more of his ideas, but first to

(Continued on Page 23)

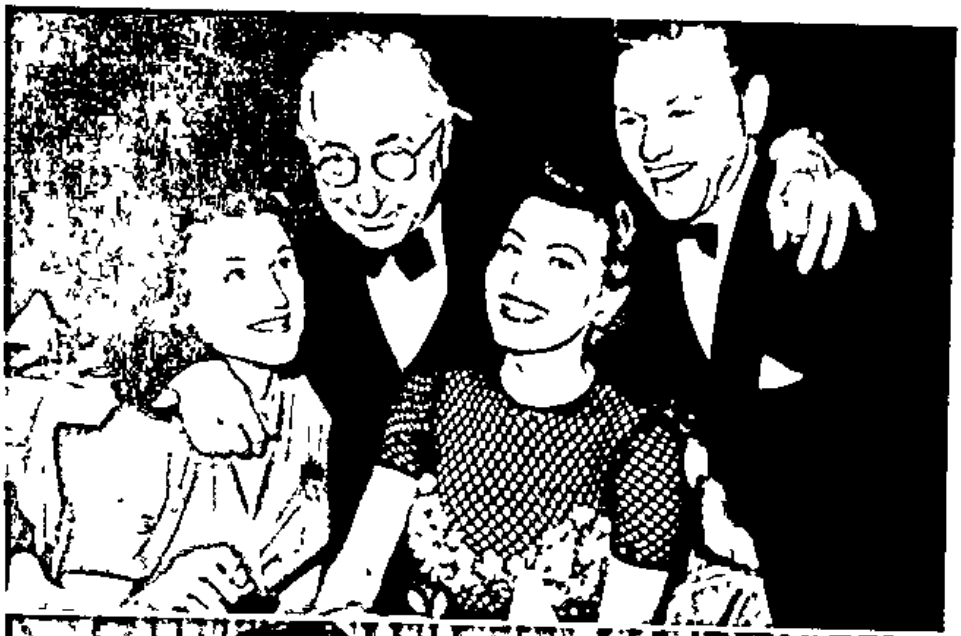




In handling 30 by 40 inch prints the Kronquist living room and back yard are pressed into service. The lower picture in the yard is just outside the lab.

With Hyman Fink

Staff photographer, *Photoplay Movie Mirror* and *Radio Mirror*



Mrs. Howard Strickling, Louis B. Mayer and Mr. and Mrs. Mickey Rooney at the Paladium.



George Burns, Gracie Allen and Mickey Rooney at the China Relief Broadcast.



Gail Patrick and Ensign Phil Kellogg at the opening of Hollywood Stars Field.









Upper left Mickey Rooney at Charity Fight VACS Any time Mickey shows up where there s a drum he ll be found doing his stuff before the evening is over Upper right Jane Withers displays a little horsemanship Picture taken at Jeffries Barn Burbank at a party given by Jane s mother to celebrate her birthday Lower left Jackie Coogan at the Brown Derby Hollywood Jackie is in the army now Lower right Jane gets Babe Ruth s autograph

FIESTA AT EL RANCHO BLANCO

By Fred A. Parrish

Fred A Parrish was born in Boscobel Wisconsin He enlisted in World War I as a machine gunner After the war he made his home in Colorado where he worked as a cinematographer at the Fox Film Corporation He has traveled in Europe Africa and the South Seas as a cameraman making adventure films—and he himself has had plenty of adventures

For the last ten years he has lived in California and has been employed on such popular productions as "A Star is Born" starring Janet Gaynor and Frederic March "Prisoner of Zenda," starring Madeline Carroll and Ronald Colman "Nothing Sacred" starring Carole Lombard and Frederic March "Made for Each Other" Madeline Carroll and James Stewart "Tom Sawyer" starring Tommy Kelly "Gone With the Wind," starring Vivien Leigh and Clark Gable "Rebecca" starring Laurence Olivier and Joan Fontaine "Intermezzo" with Ingrid Bergman and Leslie Howard—and others

This is Mr Parrish's second visit to Mexico City as a free lance correspondent for Associated Press Look Magazine and Screen Guide It is his ambition to produce stories and pictures showing the tremendous improvements and the progress in Mexico thus helping us better to know our good neighbors there It is his prediction that Mexico will be among the top ranking nations economically and politically due to the progressive leadership she now has

Mr Parrish found all of the governmental departments very generous and understanding His work was greatly aided by Mr Alexander Buelna, Jr head of the Federal Tourist Department

Mr Parrish says that the tourist visiting Mexico will be treated with consideration and courtesy As an example the Mexico City Police Department has a special group of officers who speak English and to designate this they wear a small United States flag on their sleeve so the visitor who does not speak Spanish may consult them

Mr Parrish photographed President Camacho and his wife and Fernando Casus Alenan Secretary to Minister of Interior in their homes and found them very democratic and hospitable (Editorial Note)

Singing voices hurrying feet Topping all this the ever resounding pat pat of many hands shaping the tortillas without which no Mexican meal would be complete In the early morning hours the girls in the kitchen had been busy grinding the corn and rolling it out to the required thinness Chickens were being picked and ears of corn being shucked All was astir on the Rancho Blanco Today was fiesta! At least a hundred guests had been bid to share the festivities

The most outstanding part of the entertainment was to be the pole dance of the Aztec Indians In the old days there was human sacrifice but now it is a yearly ritual to commemorate the warriors of a past decade

A group of players yes one might well call them actors, were dancing to the rhythm of a drum near the entrance gate At the end of the dance Chief Cuatdomac (meaning Fallen Eagle, so-called after the last Emperor of the Aztecs before the conquest of Cortes) stepped forward and in sonorous rhythm of blank verse related the conquest of Mexico the supporting actors enacting his story, in the background in pantomime

In one of the courtyards beyond a typical Mexican band played on guitars and mandolins Charming senoritas in gay costumes, authentically typical of the various states mingled with the guests strolling in the courts and gardens

At last a stir of excitement the Indians were preparing for the pole dance the outstanding feature of the day's entertainment

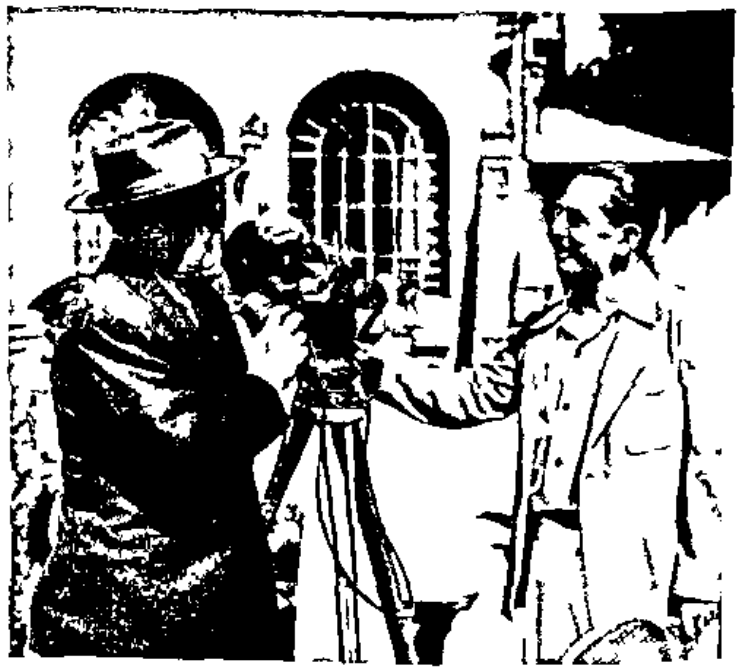
A tall straight pole was set up in a deep hole in the center of the terrace near the swimming hole Formerly babies were first placed in the hole for human sacrifice to placate the gods but now a piglet or chicken is thrown in to form the cement with the dust to make the base firm

The pole is about five feet in circumference and rises a hundred and fifty feet upwards into a crystal clear blue sky A heavy rope spirals to the top, interspaced

President and Senora Avila Camacho at their home



Parrish and Senor Fernando Casus Alenan







Organ cactus



Upper: Smiling native girl in colorful costume Lower The gallant young gentleman getting the shine is the son of Senor and Senora A Sanchez Valdez San Luis Potosi Mexico

a foot and a half apart Long ropes six in all hang pendant from the top to the ground

Two Indians in soft white shirts and the usual white trousers belted with a rope and tied in at the ankles climb laboriously to the very top On top is a wheel of hexagonal shape hung so that the top of the pole acts as the axle and poles radiate spokelike from the center pole to the edge of the wheel The long ropes which stretched from the top to the ground are now slowly and evenly wrapped around the head of the pole allowing a two foot overhang from the edge of the wheel

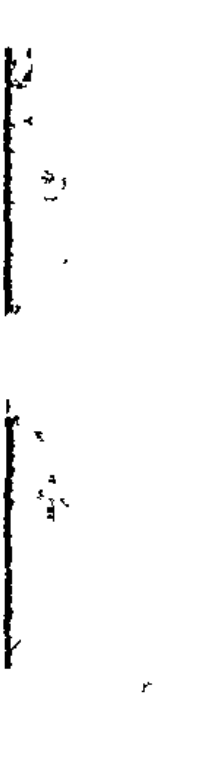
A high shrill pipe announces the advent of the first ceremonial dancers colorfully clothed in bright red loin clothes Feathered anklets draw a sharp contrast to the bronze colored skin Three reeds in back hold aloft semi-circles of bright colored feathers belted on at the waist line A latticed square of reeds, flower trimmed is carried in their arms A drum now takes up a rhythmic beating for the actual dance around the base of the pole In slow measured dignity they execute their dance steps in circular formation Suddenly at a signal from the piper the dancers toss open the lattices forming arches that represent the rainbow Through this arch come the chief performers clad in feathered capes, wristlets and anklets Feathered headdresses with beaklike masks



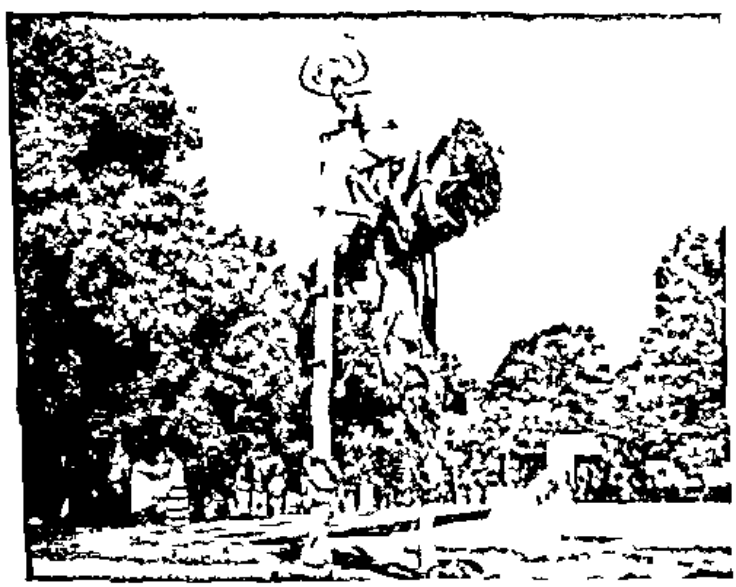
Aztec Indians ready for the pole dance Semicircles of brightly colored feathers are held aloft by three reeds belted at the waist



Climbing the one hundred and fifty foot pole, with bodies silhouetted against the sky, the scene resembles a human totem pole



They have reach the rim of the dancing on a diameter



Wheel propelled during the dance by three men throwing their weight against a huge paddle



Market day in one of the villages Wares are displayed under colorful canvases

complete the costumes These six then start climbing the rope spiraled pole and as they ascend bodies silhouetted against the sky they form a human totem pole

Ever upward they climb higher and higher and as each reaches the top he seats himself on the rim of the wheel

One of the number, in white feathered trappings, stands upright and dances on the top of the pole Indeed a platform of 12 inch diameter, at that height is much too small for comfort for both performer and spectator

Suddenly the tempo of the drum advances and the six men on the wheel swing over—head down—held only by a loop caught over the feet Slowly the rope at the top starts to unwind and as the revolutions of the wheel become more rapid the men are swung outwards in an ever-widening arc, until finally they reach the



od are seated on
of them starts
relve inches in



The six men have swung over the wheel The tempo of the drums advance, the revolutions of the wheels at the top become faster . . faster



With heads down held only by a loop over the heel the men are swung outward in an ever widening arc until they reach the ground



In the fields nearby oxen patiently pull the plow with the farmer perspiring behind it



Charming senoritas in gay costumes, authentically typical of the various states watch the ceremony

ground A few more steps and the dance is complete l

At one side during the ceremony of the pole a mammoth wheel looking like an overgrown water paddle is propelled over and over by four men throwing their weight forward against the paddle as each one consecutively reached the top of the revolution maintaining their positions in defiance of all the laws of gravity as the paddles are equipped only with hand holds

The guests were then served an al fresco ranch dinner at the times that most suited their individual tastes and interests

Dancing singing and music continued until evening shadows came creeping over the surrounding hills The gay and laughing guests take leave Once again the calm of night enwraps El Rancho Blanco



Left to right David Perez Rulfo Director of the Penitentiary Arthur Arriga de lo Cobos, Captain of the Cabalerria J A Del Campo Department de Turismo Martin Vergara attorney for Jackson, the alleged slayer of Trotzky and at the right Jackson h mself



King Carol answers some of Fred Parrish questions.

King Carol s replies to some questions Mr Parrish asked him are most interest ing The following text contains a few

Q *What is your opinion of the future of Mexico internat onally and economic ally?*

A I view the future of Mexico with great interest First, it is the geographic binding point between Anglo Saxon and Latin America They make possible the joining of two racial entities Mexico has assumed great importance through a lute pol tical leadership It will have an im portant place in the present political world crisis due to her complete collaboration with both North and South America Eco nomically Mexico is a country of enormous resources a vast and fertile farming coun try At present great effort is being made to produce natural rubber There are vast natural resources in Mexico only waiting for development.

Q *What is your personal opinion of the underlying reason for the present world disorder?*

A Those who made the last peace good or bad received blow after blow without sufficient reaction in defense of the treaty and its principles Perhaps due to senti mentality and lack of cooperation between the nations the trespassers were always given a soft answer There was a not ce able lack of economic cooperation and I can cite as an example the insuffic ent eco nomic support offered the newer and poor er countries I have observed with great pleasure that the leaders of the present world pol cy have seen this point and set up resolutions which would in ure a future peace for the entire world

Q *Do you think the present conflict i ill end in greater i orld unity?*

A It is doubtful but possible, as the historical development of Europe has been quite d fferent than that of the United States The wish for national independ ence and liberty has always been prevalent in Europe An example Former Aus tria composed of many d fferent nation alit es the people have a tendency for na tional and ethical frontiers This is not dangerous as it keeps alive a national feel ing for their individual frontiers and does not become a cause for rivalry Through a solid sy tem of economic and political alliances it could be the best stimulant for world colaboration On the other hand a *too centralized system would* not and *has* not produced good results

Q *What readjustments do you consider necessary for a lasting peace?*

A I cons der it will be necessary to use the pol tical principles of nationality which were incorporated in the treaty after the first World War These must be applied and enforced so that each nat on irrespec tive of size or power may have the right to live peaceably within its ethnographical frontiers Econom cally a solution must be found to make an equitable balance be-tween production of the soil and the manu factured output After the la t war the prices of the manufactured articles went up and prices on the produces of the so l went down

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Motion Picture Sales Division

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cumstances The emphasis is not on engineering, but on the program, with engineering as one of the tools used in accomplishing the program

The essentials of the technic are set forth Proper preparation requires constant servicing of equipment when the latter and the staff are available A pre program test several hours before program time is essential to consistent performance, and allows reasonable time for correcting installation or transportation-caused faults A suitable equipment warm up period precedes the program Service failures during the program are usually unpredictable but must be met by prompt diagnosis and repair Thorough knowledge of the many circuits, normal and abnormal operational characteristics thereof, and the knack of finding trouble are requisites of this aspect

Methodical preparation eliminates some of the difficulties The television engineering attributes of a program location are tested and recorded prior to the arrival of equipment Voltmeter, dummy load, photometer, field glasses, and photographic camera comprise the preliminary test *equipment Experiences in televising 140 separate* portable programs of the Don Lee Television Station, *W6XAO* Hollywood are described

RCA Audio Chanalyst—A New Instrument for the Theater Sound Engineer, ADOLPH GOODMAN AND EDWARD STANKO, RCA Manufacturing Co, Camden, N J

During the past decade, the technic and equipment of the sound device engineer have improved tremendously Progress in this section of the industry has kept pace with other developments, until today the methods and procedures in this branch are solidly based upon good engineering practice

The growth in this important phase of theater operation has brought with it many new and important instruments for more accurate quantitative measurements of equipment performance This has led to the demand for a light, compact test instrument incorporating the functions of practically all the various instruments now carried by the theater sound engineer The requirements for such an instrument are met by the RCA Audio Chanalyst In addition, an entirely new service technic known as Audio Signal Tracing has been made available through use of this instrument

This means that tests and checks can be made on an amplifier or sound system while the equipment is operating under normal conditions In tracing the audio frequency signal, visual and quantitative checks are combined with aural tests The compactness and flexibility of the Audio Chanalyst decrease the time required to locate troubles, and the engineer is now provided with new devices to allow him to do a more precise and efficient job on a routine service call

A One-Ray System for Designing Spherical Condensers; L T SICKTLEBEN, RCA Manufacturing Co., Indianapolis Ind

A spherical condenser is a simple lens of relatively large aperture The outer portions of such a lens focus the rays much nearer to the lens than do the center portions As a result the lens as a whole fails to produce a sharp image This defect is known as spherical aberration Although no sharp image is produced, an image like region of maximum light concentration does exist This is known as the disk of least confusion. Its diameter may be minimized by shaping the lens so as to minimize spherical aberration. It is with this disk of least confusion and its required location that the designer of a spherical condenser must deal

Without a knowledge of the properties of the disk of least confusion a designer might compute rays through a large number of trial lenses until, by an extensive and costly trial and-error process, a condenser having the correct shape for minimum spherical aberration, with the disk of least confusion at the required location, may be obtained

The present paper examines some simple properties of the disk of least confusion It shows how, by computing the course of a single ray through the proposed lens, a spherical condenser will result having the correct shape for minimizing spherical aberration, having also the *correct center thickness for its assumed diameter* and edge thickness, and for which, finally, the location of the disk of least confusion is known. The method is applicable to condensers comprising more than one lens, and leads to the required design with a minimum number of relatively simple trials

Developments in Time-Saving Process Projection Equipment; R W. HENDERSON, Paramount Pictures, Inc, Hollywood, Calif.

The projection of a motion picture on a translucent screen for background purposes has become increasingly important in studio operations during the past ten years Many shots now made through the use of this process would have been extremely costly and perhaps impossible if attempted by direct filming of the complete action.

The sharp rise in production costs in the past few years, attributed partly to the foreign market situation, demanded that every effort be expended to simplify production methods.

With this in view, Paramount Pictures embarked upon a complete modernization program of the Transparency Department production equipment early in 1940 New compact projection units, bases for the projectors, rewind tables screen frames, screen handling equipment, and light bridges were designed and built This equipment has immeasurably simplified operations as well as improved quality beyond levels heretofore achieved.

Specifications and descriptions of this equipment are presented, with emphasis upon a comparison of the new with the old. The success of this equipment can be attributed largely to standardization of component parts Complete interchangeability of essential units, coupled with easy access to critical points, has gone far toward eliminating lost time and motion in meeting unexpected emergencies

Cinematography as Practiced in Hollywood, 1942, JOHN W BOYLE, Hollywood, Calif., in collaboration with others

The purpose of this presentation is to describe current practice in cinematography as followed in the Hollywood studios, Some of the subjects to be covered are camera equipment, set lighting, operation of camera crews, exteriors and use of booster light, exteriors taken indoors, make-up, diffusion, coated lenses, use of light meters, color contrast of sets, set and production designers, value of hard light for exteriors and interiors, stand ins, air photography, matching stock shots, Technicolor and bipack, Kodachrome, and mono pack

The Focusing View-Finder Problem in Television Cameras; C L. BEER, RCA Manufacturing Co, Camden, N J.

The technical excellence of a television program may frequently depend upon the characteristics of the view finder used in the television camera Conditions peculiar to television make it desirable that television camera view finders be of the focusing type The requirements of an ideal view finder of this type are discussed During the past ten years a number of view finder arrangements *have been investigated in connection* with the development of television cameras Several of these are described and their relative merits indicated.

Some Recent Developments in Record Reproducing Systems; C L. BEERS AND C M SINNETT, RCA Manufacturing Co., Camden, N J

Several factors of importance in obtaining satisfactory reproduction of sound from lateral-cut phonograph records are considered An experimental record reproducing system employing the principles of frequency modulation is described and data are supplied on the measured and calculated performance characteristics of the system. Curves are included showing the vertical force required for satisfactory tracking with the experimental frequency modulation pick up as compared with other pick ups of conventional design

Frequency Modulation Distortion in Loud Speakers; C. L BEERS AND H BELAR, RCA Manufacturing Co., Camden, N J

As the frequency response range of a sound reproducing system is extended the necessity for minimizing all forms of distortion is correspondingly increased The part that the loud speaker can contribute to the overall distortion of a reproducing system has been frequently considered A type of loud speaker distortion that has not received general consideration is described This distortion is a result of the Doppler effect and produces frequency modulation in loud speakers reproducing complex tones. Equations for this type of distortion are given Measurements confirming the calculated distortion in several loud speakers are shown An appendix giving the derivation of the equations is included

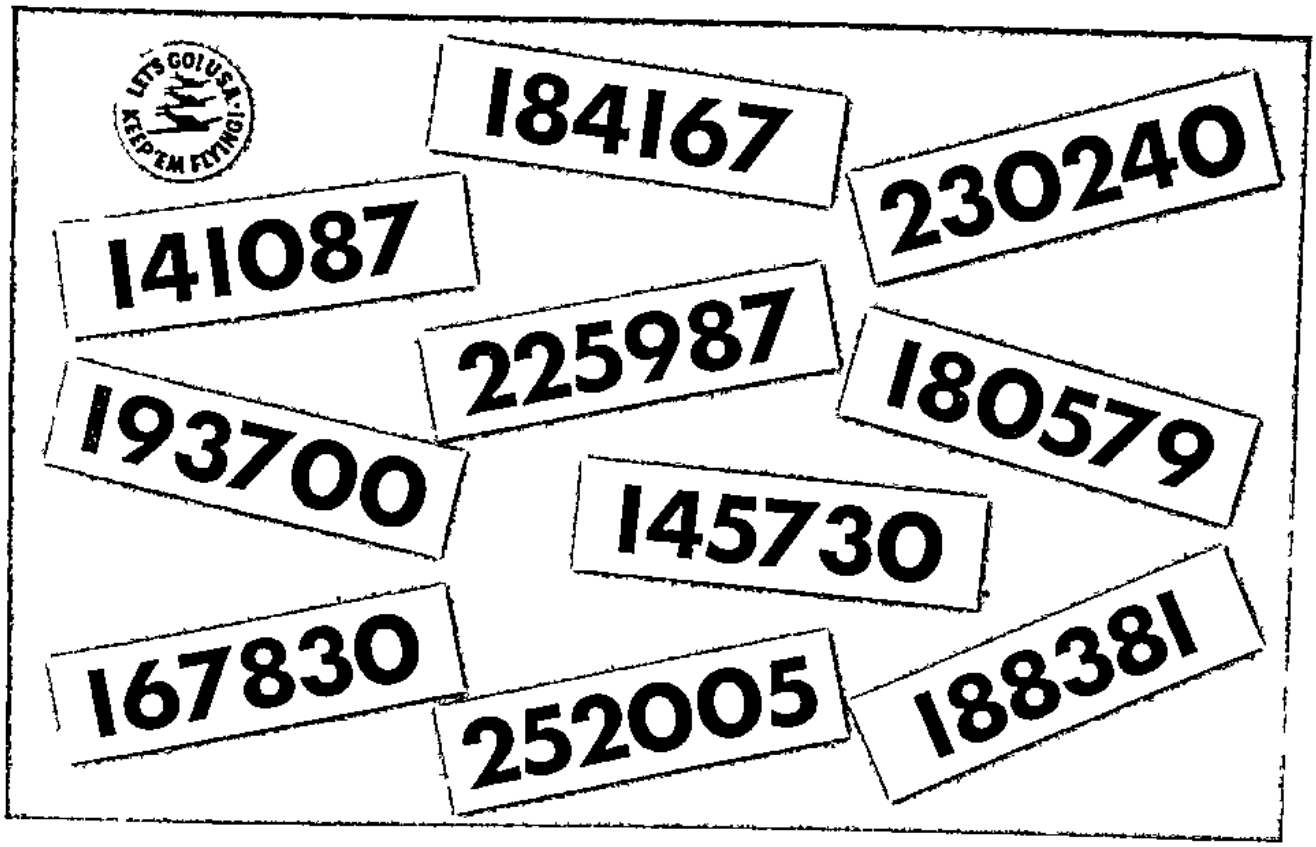
The Gasparcolor Process, BELA GASPAR, Hollywood, Calif

A brief historic review of the photographic multi layer materials and their elements will be given The principles of the Gasparcolor Process, the first multi layer material which was introduced to the Motion Picture Industry in 1933 will be described The process utilizes a positive printing stock which contains dyes in the emulsion layers in the proper densities and color balance, using indifferent treating baths for destroying the dye locally and proportionately to the developed silver image present in the photographic layers. The process uses fast dyes which have good absorption characteristics

The processing can be carried out with practically the existing facilities of the black and *white laboratories, requiring only slight additions* The balancing and printing are similar to black and white procedure, the only variables being the printing lights, keeping the processing time constant

The various steps in the process will be demonstrated and some of the results shown A brief discussion of the different taking method suitable for this process will also be reviewed

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For further information concerning the Graflex Customized reNEWal Plan see your Dealer or write to us for literature—Dept. IP542.

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Benefit by the information, ideas, helpful hints and short cuts given you in those two excellent books—*Graphic Graflex Photography* ($4.00) and *Photographic Enlarging* ($1.95)—to be obtained at your Dealer's and put the money you save into U. S. Defense Stamps or Bonds.

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Upper left shows one end of the sink and cupboards utilizing every inch of space. Right shows the opposite corner with work table under window. Lower left: The darkroom. The small cabinet on left side above the sink contains the darkroom light. Lower right is a more general view of the lab looking toward the sink at the end of the room. The lamps mounted above it are on pulleys.



S mmons Omega Enlarger mounted on a table which operates somewhat on the principle of the old fa hioned typewriter desk and may be used closed or open depending upon the size of the enlargement

Big Little Lab.

(Continue l from Page 9)

find a place where he could get the largest tenderest, rarest juiciest steak

The Kronquist s call their house a home built around a lab for all the money they had after buying their home went to ward equipp ng this lab It s as stream lined as the interior of an airplane every inch of space is utilized there s a place for everything and everything is right in that place

In the pictures you will notice the black t l ng The walls and ceiling above are tream color Below the tiling s alls and tables are a live shade of blue There s qu te a sentimental story behind that blue shade Table tops are restful terra cotta which color is further carried out in the tiled linoleum on the floor Here and there is a splash of yellow and duraluminum moldings are used whenever molding is required An open window looks out upon a garden (yes there s a war garden too—just like yours and mine) A solid shutter is provided for this window when light is to be eliminated

The dark room is as modernistic as the rest of the lab Here the walls are pa nted blue with black t ling around the s nk

In one or two of the pictures shov n here the cupboards have been left open to show the contents of the shelves In a storeroom at the side of the lab are large bottles bags and kegs from which the containers in the cupboards are replenished

Larry has two assistants that work with him Much of the Douglas work not of a confidential nature is done in his own lab at home It is fully equipped to handle anything Of course when it comes to prints 30 by 40 the back yard and tl e living room are util zed Little Miss Kron quist aged two usually is put to bed when this happens Very popular at other times her help never seems to be appreciated when pitcher makin is going on Grown ups sure are peculiar critters

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Chinese Cadets Speak English

When this war ends there will be few of China s millions v ho will not be able to speak at least a few words of American—and there will be hundreds of thousands of China s youth who will speak it as fluently as their mother tongue

At Thunder Bird Field outside of Phoe nix Arizona where 20th Century Fox is shoot ng 'Thunder Birds a story of the training of anti Axis youth for combat duty in the air nearly 300 newly arrived Chinese cadets speak English and think in American almost as well as their Allied brothers

Speaking with a group of them Preston Foster and John Sutton discovered that classes in English are a primary part of the education of all young Chinese in China

They found that the Chinese sent here for tra ning all have seen service fighting Japan all were comm issioned during that service and were sent here because they were the cream of the flying cadet candi dates

Their service tra ning lasts eight months They will complete that course in five months There has not been a single train ing casualty nor a scratch on any of the ships loaned them

They Say···

By RELLA

● From the *Honolulu Star Bulletin* March 28 1912, "Pathe cameraman Merv Free man who has a lion farm in Hollywood when he s not cover ng wars has a sweet souvenir from his trip to the Marshall I lands its a gold plated piece of shrapnel suitably engraved 'To Merv from Tojo

● Al Brick, Fox Movietone new reel man now in uniform as war correspondent, has had a very interest ng background It dates back when he was a pioneer in the news reel business and in the production part of the game when sound was first intro duced He can remember photographing Mae Marsh Tom and Matt Moore Mary Garden and many others He also served in World War No 1 Al was in Honolulu when the Japs struck at Pearl Harbor and he was the only photographer to get real pictures of the attack Al now writes his wife "I have a gal so far away who is certainly healthy as well as hale but how can I send my love to her when the censor reads my mail?

● Off to Salton Sea to work on "Wake Island we find first cameraman Theodor Sparkuhl Harry Hallenberger and Wil liam Kelley second cameramen Jim Knott and Al Jones assistants Byron Seawright Ed Soderberg and George Lancaster

● Working on miniatures for the past few weeks with airplanes zooming overhead and a camera parallel operating in syn chronization with the movement of the planes and revolving about on wheels set on tracks are Harry Perry first camera men Len Powers, second cameraman and Jimmie King assistant, for Walter Wan ger s production Eagle Squadron"

● Floyd Crosby in from location Leaving again with Bill Clothier and Dave Smith for Sacramento California and then on to Tennessee on picture entitled Name—Age—Occupation"

● Bob Quirk leaving for service as tech nician in the Signal Corps

● Stanley Horsley rides his bicycle to and from Universal Studios Incidentally Stan ley has a specially built bicycle weighing about twelve pounds

● Cliff Stine first cameraman at RKO off to the Wright Field at Dayton Ohio where he will serve in a photographic ca pacity in the making of motion pictures for the War Department

● Warner Bros unit in Fort Sill partici pating in some realistic war activities with a unit in the air photographing explos on scenes Ellsworth Fredericks is doing the flying

● Linwood Dunn now shooting first at RKO John Eckert elevated to pos tion of second cameraman

● J C Brown newsreel director for News of the Day at Washington D C., has been



For their high budget snow p cture Republic sent cast and crew to Mammoth County in the H gh S erras. Reading left to right Monte Steadman, ass stant cameraman Bud Thack ery first cameraman Ellis Carter operat ve cameraman Jack Marta first cameraman Al Keller assistant and M B Paul st ll cameraman

stationed at that post for eighteen years "Brownie" as he is known to newsreelers, is a member of Local 644 He started in the game as a newsreel cameraman about twenty five years ago

● Rushing off to the north for Warner Bros are Charlie Boyle, first cameraman, Carl Guthrie and Eddie Fitzgerald, seconds, Mickey Marigold, Stuart Higgs Rod Tolmie and Philip O'Neil, assistants

● Ray Ramsay former MGM second cameraman, now on the way to Fort Monmouth as First Lieutenant in the Signal Corps.

● Bob Kirk assistant to Emil Oester, Camera Department, Columbia Studios, about to leave as Second Lieutenant in the Engineering Corps, Hamilton Field Fourth Area Air Force

● Still cameramen of the organization are grateful to John LeRoy Johnston and Hal Hall for their ceaseless energy in helping to make the Still Photographers' Show a great success The show will be held May 6, 7 and 8, 1942, at the Academy Review Theatre, 1135 North Gordon Street, Hollywood, and will be open to the public without admission charge during afternoons and evenings Members are invited to attend and bring their friends

● Stanley Cortez, now under contract to David O Selznick, has turned in two fine photographic jobs on Orson Welles production, "The Magnificent Ambersons," and the Walter Wanger production, "Eagle Squadron"

● Fred Parrish, back in town working again after having made an extensive tour in Mexico, where he had the good fortune to make pictures of President Camacho and many of the notable characters that now have taken up residence in Mexico

● Douglas Downs son of Charles Downs is now in the United States Army Charlie and Doug both are members of Local 644

● Ray Rennahan, first cameraman Irving Rosenberg second, Nelson Cordez and Paul Uhl, assistants, on their way to Florida, where they will work on the ocean photographing sequences for 20th Century Fox

● Second unit in Utah on picture, "Wake Island" includes Charles Schoenbaum and Elmer Dyer first cameramen Bill Rand second, Red Grant Ray Flinsky and Eddie Adams assistants

● Art Lloyd leaving for Fort Monmouth New Jersey, in capacity of Captain

● William Cooper Smith leaving for the same destination as Lieutenant

● Eddie Garvin leaving for service in the United States Navy as Chief Petty Officer

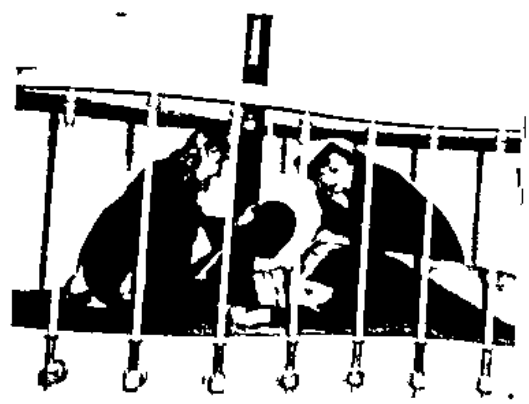
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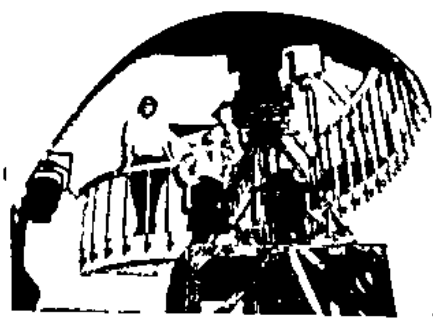
WHAT THE MOVIE CAMERA SEES



THINGS ARE LOOKING UP—Preparing to film a high angle shot for Paramount's "My Heart Belongs to Daddy," Director Robert Siodmak (center) looks through finder and confers with his cinematographer Daniel Fapp (right) and another of the technical crew.

LIGHTS, CAMERA . . . ACTION!—What the movie camera sees, and what it looks like, too, are graphically depicted in these still photographs of a scene-in-the-making for Paramount's new comedy drama, "My Heart Belongs to Daddy," whose romantic principals are Richard Carlson, Martha O'Driscoll and Frances Gifford





(Lower left) Director Robert Siodmak, in shirt sleeves, leans on balustrade as camera, in hollow core of spiral staircase turns on scene (upper right) which consists of Velma Berg (l.) and Frances Gifford (r.) kneeling to help Florence Bates (c.) who has fainted at news that Martha O'Driscoll has had baby in house.

16mm. department

Titles and Subtitles

From the moment we decided to make TITLES AND SUBTITLES the subject of our department this month we became aware of the number of cinematic and technical noses that would turn up in the air But we decided to risk the upturned noses and averted eyes because we feel that to the careful serious amateur the problem is of considerable importance—comparable, perhaps to clothing accessories

We are dealing principally with 16mm and (as too) cameras *without synchronized sound* and therefore with a silent film technique In these terms of course the motion picture which effectively tells its story with the least aid from subtitles is the best picture The problem resolves itself down to one of presentation or direction But it is not always within the limits —either financial or equipment—of the *amateur to use the technique he believes* will enable him to convey his thought without the use of a subtitle, and in such instances a subtitle used in good form is not only indicated but is often a means of prevention from ruining an otherwise good sequence by an inadequate technical effect

Titles and subtitles are more than mere embellishments. To a film well presented and of worthy subject matter they give *unity, a sense of completeness and finish* (But a word of caution here Don't try to be smart alecky Unfortunately about the only people who think the average results are funny are their originators So we definitely don't mean refrain from genuine humor But use it with restraint to season rather than to saturate the picture)

The serious-minded amateur will not be long in acquiring a "title stand" which for all practical purposes may be *any* arrangement permitting the mounting of the camera on a level support and a movable easel upon which the card (printed or hand lettered) can be mounted It is an advantage to have mountings to take care of the illumination built as a part of the *stand but if that is not possible then two* of the lamps used for interior illumination can be pressed into service quite satisfactorily here We suggest that the easel be at least 14 x 18, because many drawings you will wish to use as a background for the title will be that large The important thing to remember is that the easel *must* be movable so that the distance from the camera can be varied according to the size of the *title or background The easel need not* be an elaborate system of drives and gears—a hand operated easel with some means of locking it into an established position will suffice

Concerning illumination of titles, two things stand out first, above all it must be *even* and secondly, it need not be of a high level since the distance from the lights to the card and back to the camera lens is short Getting the lighting even is a simple trick—if you won't just guess at it! Place a pure white card on the easel in a position which the title card will occupy during the photography and place the lights in a position in which you believe they are evenly balanced Note the point on the card that will be in a straight line with the camera lens and mark it as the center Then place an ordinary 12 or 16-inch ruler perpendicular to the white card at the center point and note the depth of the two shadows cast by the ruler from each of the two lamps If the lights are balanced the two shadows will be of *exactly* the same depth and uniform in color on either side of the ruler But if one of the lights is even a *little* closer than the other the result will be an unevenness in tone and shade that is readily detectable and can be corrected by moving the light causing the lighter shadow out a little way or the light causing the deeper shadow in a little closer In this manner a uniform illumination can be secured Another point to remember is that the lights should not be at too great an angle to the easel giving oblique illumination, keep the lamps fairly close to the camera—and *watch for reflections from the card!*

As a rule black lettering on white cards is not satisfactory because the white card leaves clear celluloid on the film, and dirt and oil will show up obnoxiously after the first few screenings so that before long *projector scratches will make the film* prematurely old More than that white on black is much more legible and easier on the eyes

The exposure should be good and full —even a little over—to insure a good dark black for the rest of the card But not too much over, because then it might bleed over and cause a halation

Plain black and white titles are adequate, of course, but dress the picture up occasionally and use a background for your titles The process is a simple one Photograph the printed copy first, and then wind the film back to the starting point and shoot any still picture or drawing that may be apropos Remember though, that the picture is background and it must be kept that way When photographing the background with reversal film hold back on the exposure so *that the picture will be* fairly dark and not detract from the copy

More effective than stills or drawings used as backgrounds, are moving backgrounds, where actual live scenes are used If you are using negative film go through your scenes and pick any of them that lends itself Photograph the copy—white letters on a dead black card and have the lab double-print the two printing the picture *down deep enough for background* Of course if you are using reversal film you will have to pick the scene especially for the copy, expose lightly so that it will go dark on the screen wind the film back to the starting point of the scene and put the camera on the title stand and expose the white-lettered title on the black card in the usual manner The effects obtained using live backgrounds are well worth the effort, because of their beauty

Don't make your subtitles too long Yes many people do read slowly but an excessively long dragging title will have a devastating effect upon the story and will ruin one that moves along well in itself On the other hand though take care that they're not so short that your audience fights to get them read in time and forgets all about the picture in the effort

For the main title try using a hand lettered card with an art background (They're not as expensive as they sound) You might prefer the black lettering on a light ground to set it off but don't use a pure white card unless in the art work the white can be air brushed down a little so that it will not photograph pure white

Yes by all means use titles and subtitles—but remember that they're accessories to a well presented well-directed film

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PATENTS

By ROBERT W. FULWIDER, *Patent Attorney, Los Angeles*

No 2,270,716 — COLOR PHOTOGRAPHY *Charles W Wyckoff* Appln March 13, 1939 9 claims

A screen plate method of making positive prints on paper

No 2,270,717 — COLOR PHOTOGRAPHY *Joseph A Ball*, assignor to Technicolor Motion Picture Corp Appln Feb 27, 1939 2 claims

A method of reproducing colored positives which comprises producing color separation negatives by using a Technicolor camera and then using selected color printing lights to get positive matrices

No 2,271,176—PROCESS FOR THE MANUFACTURE OF COLOR PHOTOGRAPHIC IMAGES, *Bela Gaspar* assignor to Chromogen Inc Appln Dec 11 1939 6 claims

The process of producing a reversed dye image from a silver image in a developed layer impregnated with an azo-dye coupler which comprises using a diazonium salt in an acid solution and controlling the pH of the solution

No 2,271,228—PHOTOGRAPHIC FILM SUBBED WITH HARDENED GELATIN *Gale F Nadeau* and *C B Starck* assignors to Eastman Kodak Company Appln Sept 16 1939 11 claims

A photographic film free from stripping and brittleness comprising a cellulose ester support and an emulsion layer and between said support and said emulsion layer a layer comprising gelatin hardened with chromic chloride

No 2,271,229—FOG INHIBITOR FOR PHOTOGRAPHIC DEVELOPERS. *Peterson* and *Evans* assignors to Eastman Kodak Company Appln Nov 10 1939 3 claims

A color forming photographic developer comprising a primary aromatic amino developing agent a coupler compound and 5 nitroindazole

No 2,271,230—SULPHONAMIDES OF DYES. *Peterson* and *Weissberger* assignors to Eastman Kodak Co Appln Aug 31 1940 6 claims

A light-sensitive photographic element including a filter layer comprising gelatin having therein a non diffusing dye having a general formula

No 2,271,238—COLOR FORMING COMPOUNDS CONTAINING SULPHONAMIDE GROUPS *Tuttum Peterson* and *Porter* assignors to Eastman Kodak Co Appln April 5 1939 7 claims

A color forming photographic developer comprising an aromatic amino developing agent and coupler

No 2,271,572—CINEMATOGRAPHIC PRINTING APPARATUS. *Gerald F Rackett* assignor to Technicolor Motion Picture Corp Appln June 12, 1940 17 claims

A printer having a belt with teeth on it for stretching one of the films during printing

No 2,272,000—CLAW MECHANISM FOR MOTION PICTURE APPARATUS *Goldhammer* and *Kaden Germany* assignors to General Aniline Appln Dec 7 1939 3 claims

A film advancing claw mechanism to the Mitchel type

No 2,272,556—COLORING PHOTOGRAPHIC IMAGES—*Alan W Gundelfinger* assignor to Cinecolor Inc

No 2,272,557—TONING PHOTOGRAPHIC IMAGES, *A W Gundelfinger* and *Trimble* assignors to Cinecolor Inc Appln Dec 20 1938 3 claims each

A method coloring images which comprises blue toning them and controlling the pH of the treating solutions

No 2,272,638—METHOD OF COLOR REPRODUCTION *Arthur C Hardy* assignor to Interchemical Corp Appln Sept 1, 1936 4 claims

The method which comprises taking a plurality color-separation photographs of the same subject modulating a plurality of electric currents in accordance with the variations in tone of said different color separation photographs, and utilizing all said electric currents to control a single recording device

No 2,273,112—COLOR CAMERA AND PROJECTOR *John G Kleinhen* assignor to Klaess of 15 per cent Appln Jan 23 1941 4 claims

A color camera using a beam splitter

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WASHINGTON NEWS LETTER

To Herb Aller

This is a new department which we hope to continue each month, depending upon how much news our Washington correspondent may be able to send us. (Editorial Note.)

Here is the Washington Military Motion Picture set up as of today

The Army

The Signal Corps motion picture producing activities consist of making a series of Training Films for different branches of the Army and a new series of Film Bulletins to show the boys of the other branches plus instruction and special messages that the Army wants to convey to the individual soldier

The Signal Corps Photographic Department is under the direction of Col Richard Schlosberg who is located in the War Department at Washington. He directs the activities of all photographic work still and motion picture

The biggest field operation is the Army Training Film Production Laboratory that has just been moved to the old Paramount Studios at Astoria L. I. and is under the direction of Col Gillette who supervises the making of Training Films units in the field and at the studio. Then there are the Training Films produced in Hollywood under the direction of Col Darryl Zanuck by the Academy of Motion Picture Arts and Sciences.

Under a new arrangement Major Frank Capra will have under his direction the production of Orientation Films and Film Bulletins to be shown the soldiers in their camps and training centers. At the present moment the film is being edited from the newsreel libraries and the government vaults for the Orientation subjects and the Film Bulletin will be made at different camps and stations to show the soldiers what their buddies are doing—in reality an Army Newsreel shown in Army Theatres

Of course the Army expects to have units available to go with the troops in the field for coverage of combat in the fields of operation but for the present the "theatres of operation" are covered by a group of "War Correspondents" accredited to the Army in the field made up of staff newsreel cameramen operating in a pool for the whole coverage in all the theatres of operation. This film is used by the newsreels and still pictures syndicates as news and copies are turned over to the Army and Navy for official purposes. There they are reviewed to eliminate any information that should not get into the hands of the enemy before being shown publicly.

THE AIR FORCES motion picture producing activities are now being organized. Col Milton Kaye Director of Photography for the Air Forces will assemble units to make training films combat activities and special technical photographic missions. The Public Relations Bureau of the Air Forces, under the direction of Col Arthur Ennis Chief will make pictures for publicity purposes and for the dissemination of news subjects of the Air Forces around the world.

The present Training Film Unit at Wright Field loaned by the Signal Corps in all probability will be transferred to the Air Forces under the new organization.

The Navy

The Bureau of Aeronautics is the biggest motion picture producing unit of the Navy. They are making the Training Films and technical subjects and they will make the combat pictures when organized to carry on. This work is under the direction of Capt Durgin with the assistance of Lieut Comdr Taylor. The work is now split up so that Lieut Comdr Seth Warner has charge of the Training Film and Technical Film program and Lieut Comdr Bonnet Powell making the special events and pictures for publicity purposes. The Navy is also getting some of their Training Films from the Army and commercial producers to supplement their own productions. The pictures of the Navy in operation in the "theatres of war" are covered by War Correspondents" accredited to the Navy, made up of "newsreel men" operating in a pool for the newsreel.

THE MARINES have their own Photographic Units under the direction of Brig Gen. Denig Chief of the Bureau of Public Relations, U. S. Marines, and his assistant, Major Vanderhoef. They make their own Training Films and other subjects of publicity value under the direction of Capt. Nelson at Quantico

The Coordinator of Information

This unit known as the Col Donovan Outfit," has its Photographic Presentation Unit under the direction of Comdr John Ford assigned from the Navy. They make special sequences to be added to film gathered from all sources plus additional scenes made by their own cameramen to be edited into special subjects for the use of the President then later sent to other departments and abroad to our allies

Cameraman Invents "Glamourglow"

There's a new word to add to the colorful terminology of the Hollywood sound stages.

It's "glamourglow," and it was coined by Jerry Ash head cameraman on the "What's Cookin," company at Universal.

Ash was instructing the placing of a small spotlight used in a closeup to obtain a diffused halo effect around the person of Jane Frazee romantic lead in the film when the word came to him. The tag was promptly taken up by the crew and the spotlight thenceforth called a "glamourglow."

New Blackout Bulb Unit

Important changes in blackout bulb specifications are announced by the Wabash Appliance Corporation, Brooklyn N. Y., whose silver lined blackout bulb placed on the market in early January was put through exhaustive blackout tests in actual city wide blackouts in practically every state. Specification changes are based on the results of these tests, as well as on various official recommendations.

The most important specification change is in color of light from blue and red to deep orange recommended by the Office of Civilian Defense. Other changes are in size which is smaller in reduced current consumption to 10 watts in elimination of the former built in reflector and the improved type of heavy black silicate coating to prevent light leakage.

The deep orange light that the new unit provides is said to be ample to permit room occupants to see each other plainly as well as furniture doors and windows. The bulb will fit any household socket, and will list at 15c

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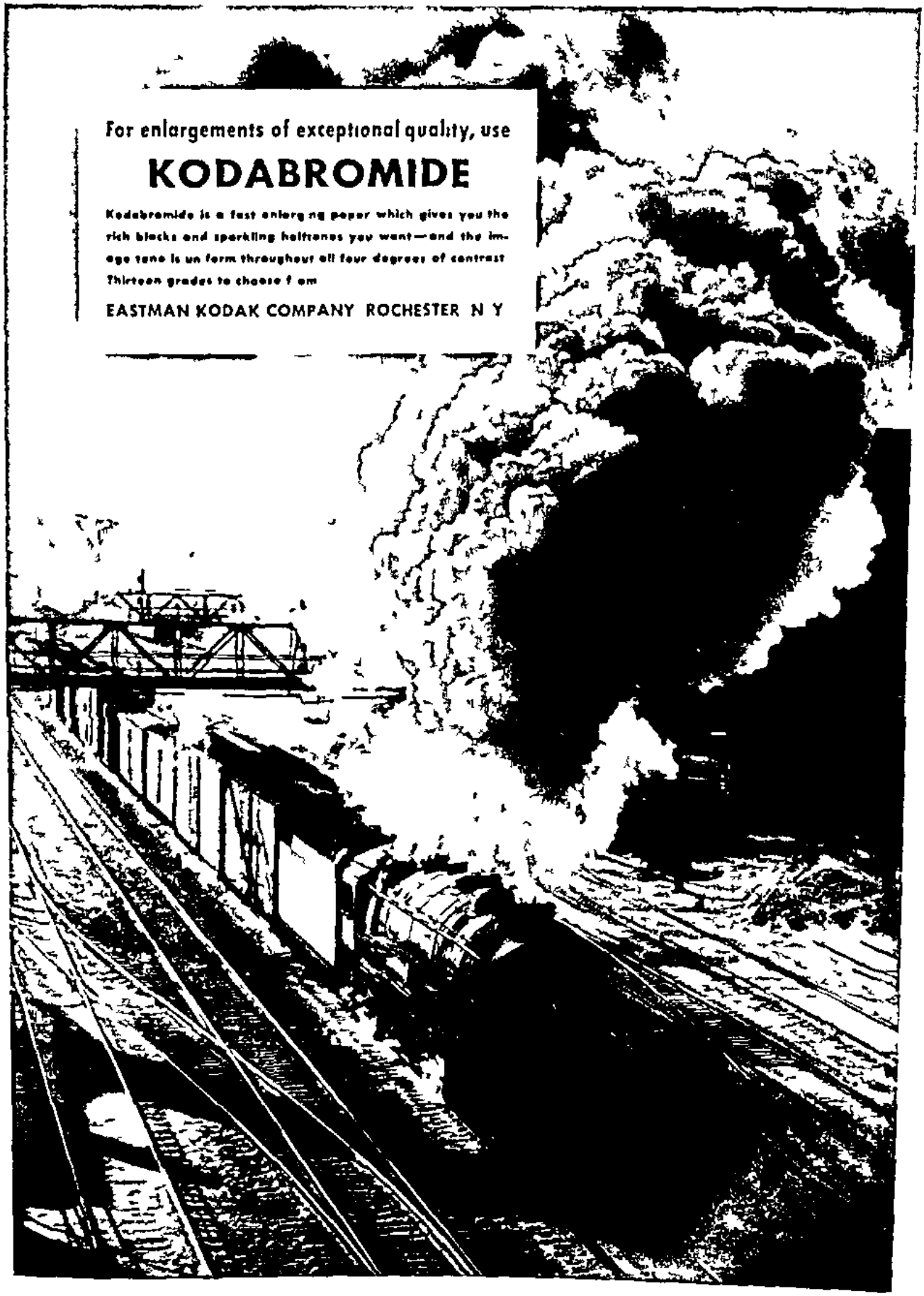
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Vol. XIV June, 1942 No. 5

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Editor, HERBERT ALLER

Business Manager, HELEN BOYCE. *Art Editor*, JOHN CORYDON HILL

Contributing Editors D K ALLISON, GEORGE HURRELL, CHARLES SAXTON, ROMAN FREULICH, ERNEST BACHRACH, ALVIN WYCKOFF, WILLIAM V DRAPER, FRED GATELY, GEORGE SCHEIBE

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INTERNATIONAL PHOTOGRAPHER, as the monthly official publication of International Photographers, Local 659, of the International Alliance of Theatrical Stage Employees and Moving Picture Machine Operators of the United States and Canada, not only represents the entire personnel of photographers engaged in professional production of motion pictures in the United States and Canada, but also serves technicians in the studios and theatres, who are members of the International Alliance, as well as executives and creative artists of the production community and executives and engineers of the manufacturing organizations serving the motion picture industry INTERNATIONAL PHOTOGRAPHER assumes no responsibility for the return of unsolicited manuscripts or material

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Upper left Portrait by Jack Woods Warner Bros. Right Rita Johnson, by Ray Jones, Universal Lower left Action out of doors, by Gaston Longet, RKO Right Joan Leslie by Scotty Welbourne, Warner Bros.

STEELHEADING WITH A CAMERA

By Chalmer D Sinkey

Along about January in the Pacific Northwest—any good sportsman glancing through his daily paper is apt to jerk to attention with a great thrill of anticipation

If his good wife senses the static in the air and steals a glance over his shoulder, she will shudder at a headline that goes something like this STEELHEAD SEA SON OPENS TOMORROW

From that moment on said wife will become a Steelhead Widow This disheveled state of affairs usually lasts for about three months and is considered hard to take unless you happen to be the fisherman

It starts out with a frantic rummage through the attic, the basement or the various and sundry hideaways for fishing togs

From there it goes on a buying spree replenishing such items as leaders reels flies salmon eggs, special rods rain proofed jackets landing nets and ad infinitum!

When a steelheader gets through having himself equipped for a season his wife usually goes to the most expensive shop in town and bedecks herself in a snazzy spring outfit, without the least fear of a kickback

All of which gives you a general idea of how tremendous this pursuit of America s largest and fightingest trout can be

Ah! There s nothing like a good tussle with a steelhead!

These packages of finny dynamite ranging from ten to twenty pounds or more in weight, can try a man s mettle and satisfy the fighting instincts of his soul In fact before he s through with them he usually has blisters on his heels dislocated wrists and a cold in his head

But the latter comments were not recommended for publication when we started out to film the whole glorious business for Movietone

The picture was to start in the early hours of a cloud flecked morning when fishermen arrive at their favored rendezvous (Of course these spots are several hours driving distance from sportsmen s homes so the days start well before daybreak)

In case the weather frowns as it is wont to do in January February and March a camera steelheader just has to keep making trips until he catches up with the right kind of a cloud flecked sunswept morning

If the morning happens to be right the chances are 99 to 9 that the rivers are wrong

Now for a steelheader the condition of the rivers is a vital point The water must not be too high nor too low

If it is overly muddy the fish will lose their appetites and if it is too clear they will eye the bait with disdainful glances The ideal situation seems to be a freezing day with a stiff wind blowing down from the icy peaks

Then if you can take time out from your frantic jigging to keep warm and if your finger is not too numb to press the camera button you are apt to get some tingling action

Movietone got its first taste of this on the upper Skajit River where the placid looking stream tunnels its way between snow-covered foothills of the Cascade Mountains The camera was perched in one end of a flat boat while three fly casters swung leisurely out from the sides testing their various tricks and encores for enticing the wily trout

A guide made lazy looking sweeps with an oar to keep the craft close to promising holes as it drifted downward with the current

Suddenly a line sang out with a whirring whine a rod bent to the water

The battle royal was on! The fish was a twenty three pounder and every ounce of him was fighting mad

He "sounded to the bottom of the river the sportsman playing out the line to give him leeway then he had a change of mind rocketing furiously to the surface A few splashes there and plunging and twisting he leaped into the air a veritable rainbow of color four feet above the water! The rod snapped dangerously we wondered how the fragile leader ever held

Then as though he had gone through his repertoire of tricks the great fish lay quietly Gently slowly he was reeled in Closer to the boat—almost ready for the landing net then with a mighty swish he was a hundred feet downstream Here he spied a jutting ledge of rock deftly managing to hang up the line

It took some time to maneuver into position to free the line during which interval the trout was rested and raring to go again

And GO he did Upstream downstream around logs into the air down to the bottom all this while the fisherman skillfully giving line or reeling in (For a sudden jerk or a forced landing before a steelhead is sufficiently played out is apt to make you lose the fish)

Finally he edged docilely enough to the boat, all of his fight was gone and just before he gave the final spectacular leap that landed him in the net the camera clicked out of film

It took approximately six hundred miles of driving four bad days seven bad fishermen and five non-combative steelhead before we came across another good fighter

By this time the family alarm clock was trained to go off at 3 30 ayem without so much as having its dial changed and we respectfuly claimed the honor of knowing more about early mornings in the Pacific Northwest than the Indians themselves

But fishermen should gather their own store of information on steelheading To tell the whole story of our struggle would be like reading the last chapter of a book first

Suffice it to say that steelheading with a camera is even more complicated than just plain steelheading and not only that, but a camera story must have a soul stirring finale In this case the stirring was done with the help of a gorgeous sunset casting its rays through the smoke of an open camp fire

Near the fire nestling picturesquely on a great jutting rock, was a tent. The back drop to all of this was a frothy waterfall while the backdrop behind the backdrop was a range of snow covered peaks The heart interest was a petite blonde lady who knew how to cast a fly and made a good show of knowing how to fry her fish after she caught them

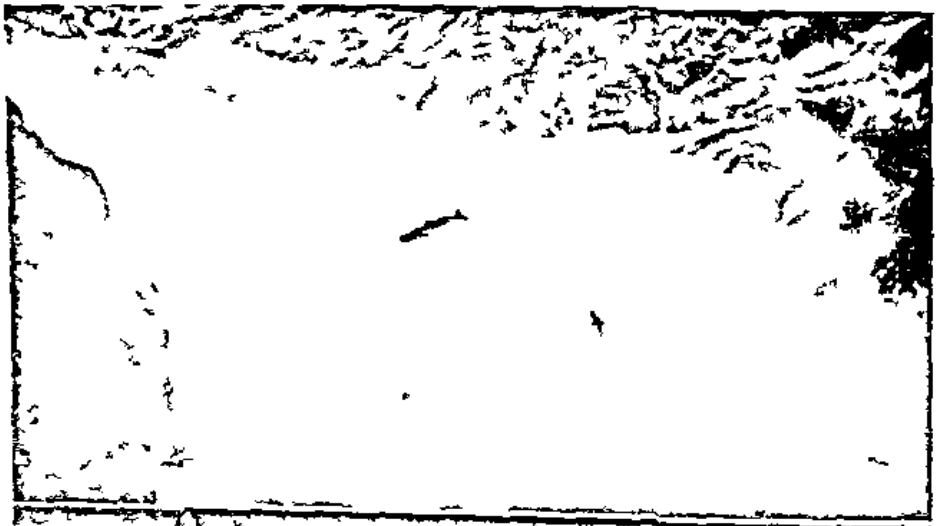
The great drawback to all of this back drop was the fact that the location was a good half mile from any highway Cameras tent fishing gear frying pans lunch and lesser props had to be carried on our backs through the woods to this idyllic spot

Considering the fact that most able bodied men are in some branch of defense work and cannot be hired for love nor money you can guess that the toting crew was limited and that after some two hours of spine tingling contact with a pack board the whole situation lost its appeal even under an orange filter

For the moment the waterfall appeared as just so much noisy H2O tumbling over slippery rocks which threatened to send us scooting into the spray if we missed a step the petite lady was uncomplaining but perspiring as to brow and the charming young man who came along to do some of the fly casting forgot to turn on his charm after he had worn a blister on each foot making two steep pack trips in from the road

But the fish were in the river! When late afternoon sun reached that established slant for just the right lights and shadows we were ready with the frying pan

The tent snuggled against a mossy ledge as though it had been there for weeks, and



Along about January these great trout start fighting their way upstream

somehow with the smell of food things took on a new vim

The scenes went off perfectly

Sixty pounds of fish swung in silhouette on neatly arranged rustic racks the day faded off the screen in a blaze of back lighting on sparkling ripples



Our camera story faded out in a blaze of glory

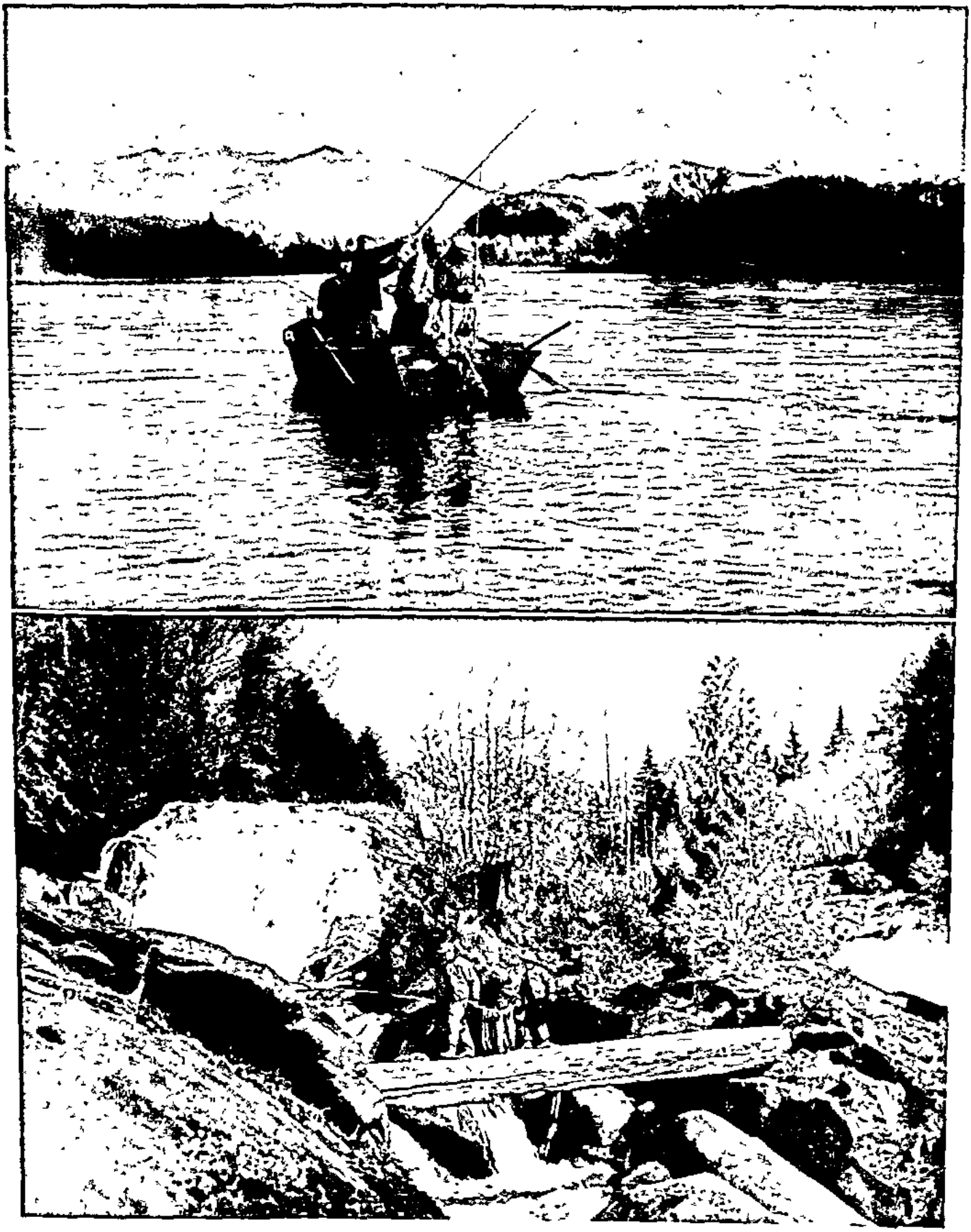
(At this point we hope that the theatre audience will sigh enviously "Ah, for the life of a fisherman!"—but the camera steelheader will rub his shoulder blades, remembering that the trek back to the highway was all UPHILL, and the tent that made such a lovely picture weighed exactly fifty pounds.)



Steelhead fishermen come big and small—but the fish are always "Big Ones."

Pictures on facing page: Upper freezing mornings on the Skagit River with a stiff breeze blowing off the ice peaks, are ideal for steelhead fishermen Lower The backdrop to our camp scene was a frothy stream

Stills by Chalmer D. Sinkey



THREE-WAY SPEED FLASH ADAPTER

By Earl Theisen

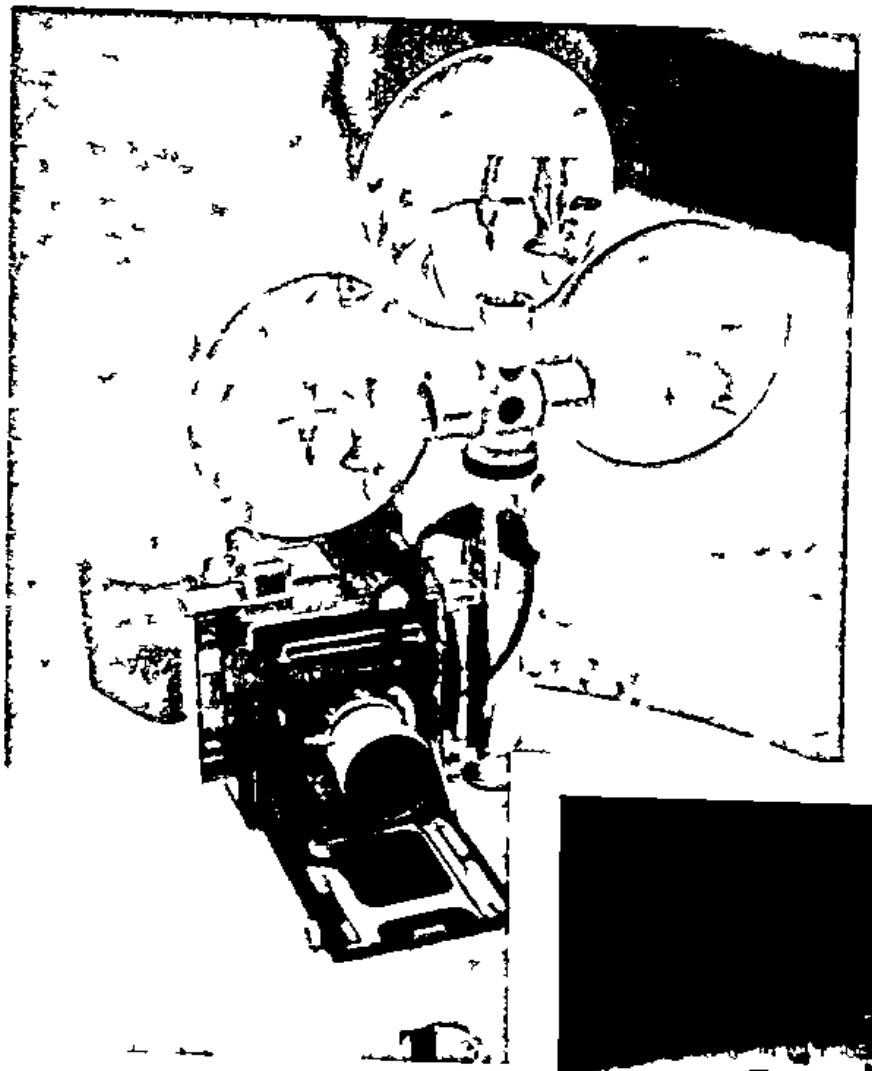


Figure 1

Photographers are becoming aware of the possibilities of Kodachrome and other color outdoors. Ways and means of increasing the speedflash light output are now sought out.

Some of the professionals have for some time been using various systems for shooting from two to as many as fifty or sixty globes in synchronization although for most work only two or three globes are essential since it is not advisable to attempt to shoot long shots indoors.

For *Look Magazine* work I've been using only two globes. For this a three-way adapter which can fire one two or three globes simultaneously was designed. While this idea is not new the feature that either the standard base or the miniature globe base may be used is different, and the construction is such that there is little chance for breakage of the equipment—an important consideration of the photographer. A local camera shop did the machine work. By taking a Mogul three way adapter of the type made of aluminum several years ago but now discontinued I had installed Sol I psockets in a head that would use the standard Sol reflectors, including the focusing 45A for miniature globes, as well as other reflector systems. It is desirable to have each device broadly adaptable so that there will never be the hazard of being unable to use the only available globes. Particularly with war requirements photographers must keep all equipment and shooting techniques flexible.

Figure one shows this three-way adapter fitted with reflectors for the large standard base bulb. These pan type reflectors may easily be removed and any of the Sol reflectors for the miniature bulb may be slipped on any one or all of the three bases.

Figure two shows another way of using two miniature bulbs. On top is a standard Sol 45A reflector while on the side is a Sol 45 speedbeam mounted on a fitting

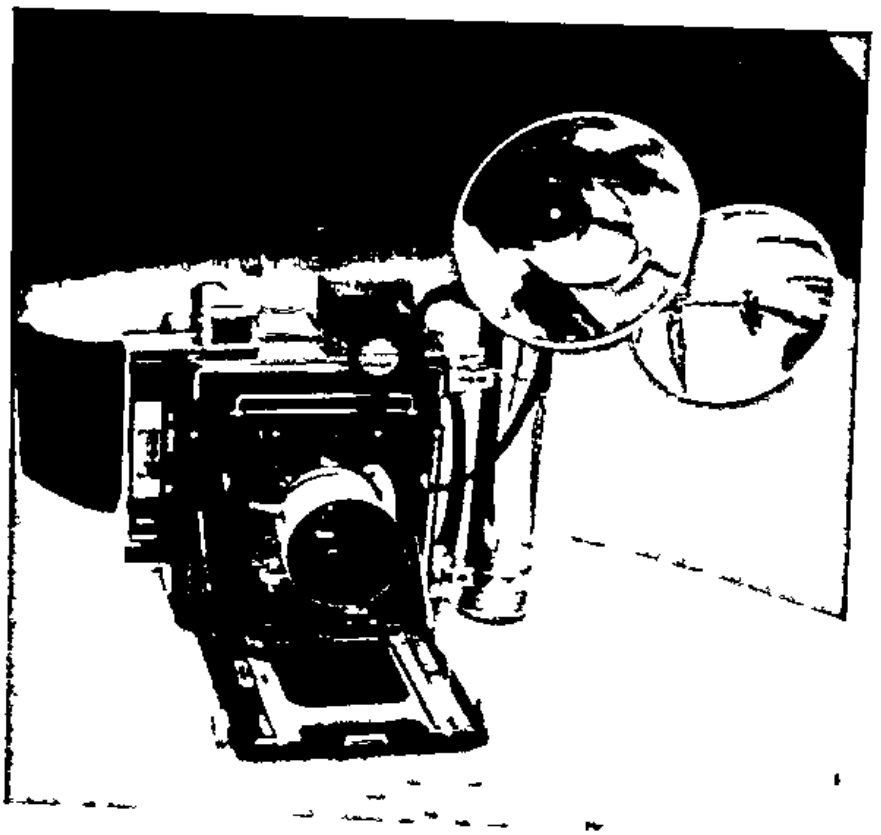


Figure 2

so that it would plug into the side of the Sol handle I replaced the bayonet socket in this latter reflector with a slipsocket to speed up and facilitate changing of globes These reflectors side by side give two globes of practically a single light source which is desirable where globe efficiency is required It must be remembered that if the two globes are separated the loss of efficiency of the light output is in proportion to this separation to the point where the globe fired at right angles to the subject has little value or effect on the exposure except for modeling the subject It is desirable to use the globes as near one light source as possible where shutter speed or stopping down is a factor For most shots with Kodachrome two globes are sufficient for distances up to eight feet

To further increase the flexibility of my equipment the Sol 45 speedbeam reflector may be plugged into the end of an extension cord for shooting remote, side light globes

Other elaborate systems may be devised for shooting more than one globe in synchronization but the best systems must be portable and fast and simple to use

Gerald Titus at Wilcox Photos has worked out a method of mounting a second reflector on Sol flashgun handle that uses available equipment which may be welcome to photographers who do not have the time nor inclination to work out a system of their own Most manufacturers are either discontinuing or curtailing the development of new devices for the duration

For use in connection with Kodachrome shot by flashbulbs I have worked out these



Kay Aldridge Virginia beauty is another Powers model the screen has called from still cameras to motion picture cameras Miss Aldridge is cast as Nyoka in the Republic serial Perils of Nyoka where for fifteen thrill soaked chapters she will brave a thousand fates worse than death Still shot on locat on by Joe Walters

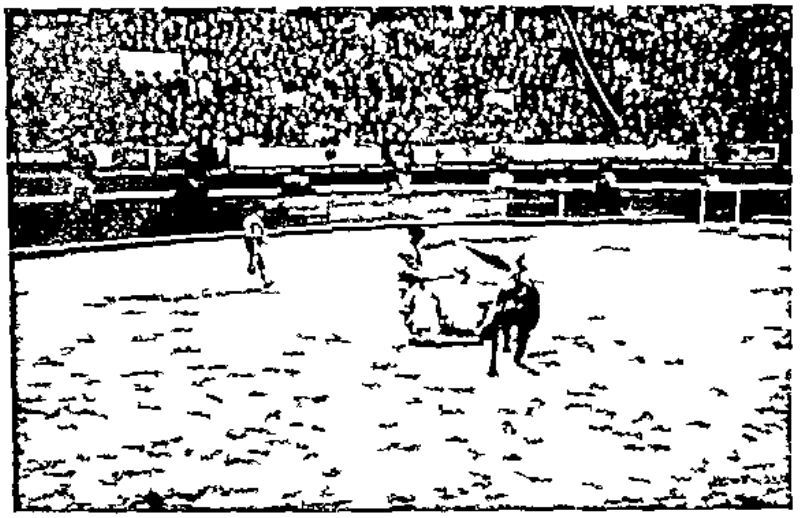
SOL FOCUSING REFLECTOR						
Mazda #5		BEAM POSITION				
feet		4	6	8	12	18
1	50 W	13.2	8.8	6.6	4.4	
2		18.6	12.4	9.3	6.2	4.2
3		22.8	15.0	11.4	7.7	5.2
1	100 W	9.3	6.2	4.6		
2		13.2	8.8	6.6	4.4	
3		16.0	10.6	8.0	5.3	
1	200 W	6.6	4.4			
2		9.3	6.2	4.6		
3		11.4	7.7	5.8		
THEISEN KODACHROME CHART						

SOL FOCUSING REFLECTOR						
Mazda #5		FLOOD POSITION				
feet		4	6	8	12	18
1	50 W	10.2	6.8	5.1	4.8	
2		14.4	9.6	7.2	5.9	4.0
3		17.8	11.8	8.9		
1	100 W	7.2	4.8			
2		10.2	6.8	5.1	4.2	
3		12.5	8.3	6.2		
1	200 W	5.1	4.8			
2		7.2	5.9	4.4		
3		8.9				
THEISEN KODACHROME CHART						

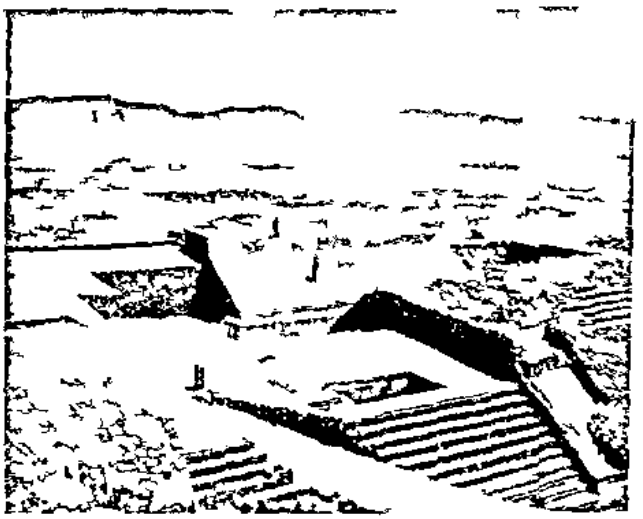
two charts for the Mazda No 5 globe They are both for the Sol 45A focussing reflector but one is with the reflector forward in beam position and one with it back in flood position These charts also take into account the number of globes the distance of the light from the subject and the shutter speed They are quite accurate and any failures in results are likely to be due to incorrect synchronization or a shutter not operating at the speed for which it is set If the chart is correct with your shutter at any one given speed it will be for all practical purposes accurate for all other speeds on the same shutter

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Re to ed ru as of a p ehisto ic basketball cau t at Mon e Alban Valley of Oaxaca n backg ound



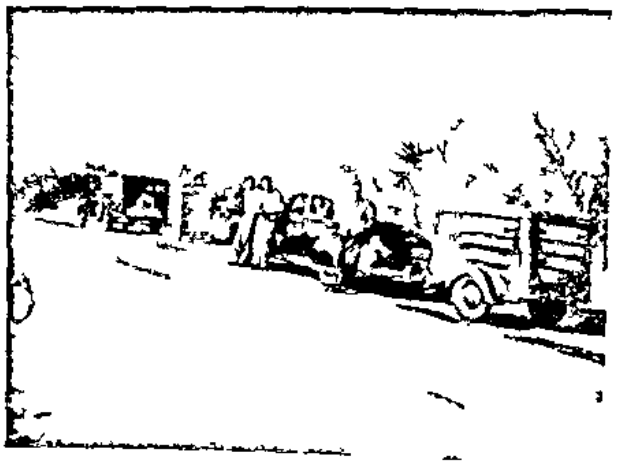
An Indian dance at Oaxaca



In Mo elia M choacan Left to ght Ben Sha pe F ed Detme s W ll Cl ne Alejand o Buelna James F tzpat ck and guide Ho a d Nelson seated



D ego R ve a famous mu al s shou ng W ll Cl ne pa t of l ts la ge colle t on of Indian a fa s



C oss ng the Tropic of Cance



Scene in Valhalla Memorial Park
By Joe Harris

With Hyman Fink

Staff photographer
Photoplay Movie Mirror
and *Radio Mirror*



Betty Hutton Gunny Simms, Judy Garland and Donald Shore enjoying a party at the Beverly Hills Hotel given for Jimmie McHugh, song writer for the motion picture industry for ten years. Some of them "I Can't Give You Anything But Love Baby" "Exactly Like You," "South American Way" "Lovely Lady"—and many others.



Col. E. W. Steinmetz Irene Dunne and Major Bates at the Jimmie McHugh party



Victor Mature and Carole Landis entertaining at the Mocambo









Upper left Linda Darnell proves that a woman always finds use for a m rror Right D nah Shore gi es the cameraman the razz berry as she stands behind Edd e Cantor at the J mmie McHugh party Lower left Deanna Durb n dances with Bob Ross at the Mocambo Bob, who is now a sold er was best man at Deanna s wedd ng Right: Ann Sothern and Bob Sterl ng at Hollywood Stars Ball Game

"This Gun for Hire," Paramount Production



The R[illegible]n (Alan Ladd)



Willard Gates (Laird Cregar) pays The Raven in marked bills for having shot Baker, a blackmailer



Ellen Graham (Veronica Lake) club, shields her employer [illegible]



Gates has boarded a Pullman Ellen and the Raven plop down in the tourist car



Ellen heals The Raven is going to bump her off because she knows too much



Ellen again meets The Raven in the park. He tells her she is the only woman he ever trusted



Ellen encourages Gates' attentions while secretely gathering information as a sort of G-woman



dancer in the Neptune
The Raven



The Raven forces Ellen to accompany him as he shadows
Gates to the railroad station



Police search for The Raven



She escapes but does not squeal not even to the man she
loves Lt Michael Crane (Robert Preston)



The Raven at last find Gates and is ready to shoot him
when he suddenly has a better idea.



The Raven rescues Ellen from Gate who had invited her
to his home then had her bound and gagged



Before jumping to his death The Raven gets a signed con
fession from Gates and his gang of saboteurs.

are The further use of miniatures with living actors color that can be shot and processed commercially with black and white methods the development of the universal focus lens which will keep foreground and background in perfect focus at all times without dividing lines the development of an automatic exposure device for the camera which will expose the film in terms of printing lights This might be accomplished through the photo electric cell After determining what printing light we wish the negative developed for the camera could be set and the photo electric cell would automatically set for the correct exposure

The development of a finder for the camera that would automatically correct for parallax so that the finder would show the same plane, horizontally and vertically that the lens sees

The development of a gyroscopic device for the camera which would automatically hold it level for plane motor boat or automobile shots

AND—Invent me an actress who will arrive on time and an actor who doesn't play gin rummy

Your lights may seem to be hidden under a bushel But you are soldiers in the army of progress You are the instruments by which civilization advances You may not be accompanied by the waving of flags and the playing of bands but you are the silent army behind a picture

I don't think when I'm shooting a scene of the genius who worked out the complicated and splendid camera through which the film is running nor does the audience know when it is applauding a picture that it is also applauding the inventor of the camera or the sound men who record and mix and dub or the delicate microphone mechanism or the laboratory men or the property men or the soundless great lamps or the air conditioning of theatre and stage or the millions of hours of sweat and genius that have contributed to the making of the picture they are seeing and enjoying

But you'll have the only thing a man can take with him the knowledge of a job well done Your shoulders are pushing behind the wheels of progress You may get tired but you'll never give up

To the slogans Keep 'Em Flying Keep 'Em Rolling and Keep 'Em Floating I want to add the slogan of the men who make motion pictures 'Keep 'Em Turning

At the speaker's table was Alvin Wyckoff whom Mr deMille introduced during his talk as his first cameraman in the early days of motion pictures Mr Wyckoff's first picture for Mr deMille was The Virginian back in 1914 The speaker paid tribute to Mr Wyckoff for many innovations still in use today We went through a lot of punishment pain and severe treatment together but after all we accomplished the results we wanted

Mr Wyckoff did not speak at the meeting but later made the statement

"My technical success during the period I was associated with Mr deMille was due to his patience in permitting me to work out the ideas of my imagination to his willingness to gamble with me and back my ideas financially in the pioneering we attempted He was always an attentive listener to ideas however fantastic they seemed at the time

'Working in very close unity through long hours and coupled with so many of his own suggestions we put into practical technique theories that still stand today

My association with Mr deMille was the University highlight upon which I was enabled to build a practical theory of development invaluable in my professional experience'

Regarding the great progress in color photography Mr deMille gave credit to Ray Rennahan and William Skall for their fine accomplishments

With Welles in Rio

For the records and as a matter of reportorial accuracy, here is the status of the Orson Welles production It's All True now shooting in Rio de Janeiro

The company, consisting of twenty six people augmented from time to time by local technicians and artists has been at work in Rio since the first week in February In that time they have filmed

Three pre carnival celebrations in Rio and its suburbs four nights and three days of the Rio carnival (done under great difficulties with makeshift lighting and sound but with great success virtually every interesting and scenic spot in city and nearby hills and mountain villages test shots of the fishermen of Northern Brazil eighteen hundred miles from Rio in Fortaleza a three-day Easter ceremony five hundred miles away at Ouro Preto every samba club in Rio most of them rehearsed and staged the staged reenactment of the arrival in Rio harbor of the famous jangadeiros who came 1800 miles on a raft to seek social justice for the fishermen of the north two weeks of close ups orchestra recordings and special sets in Cinedia Studio rented for the duration of his stay by Orson Welles A part of this time the crew has worked day and night, recording in the afternoons and shooting after dinner

"This Gun for Hire"

(See pictures pages 14 and 15)

Producer Richard Blumenthal does something new in the strange musical recording for the dream sequence which opens 'This Gun for Hire The music was recorded through a vacuum chamber something never done before It does the strange trick of putting the true echo before the true tone throughout the recording

For this dream sequence Director Tuttle and Producer Blumenthal brought Lynd Ward foremost woodcut artist of the country and author of novels done wholly in woodcuts to Hollywood to sketch every motion of the dream in woodcut style

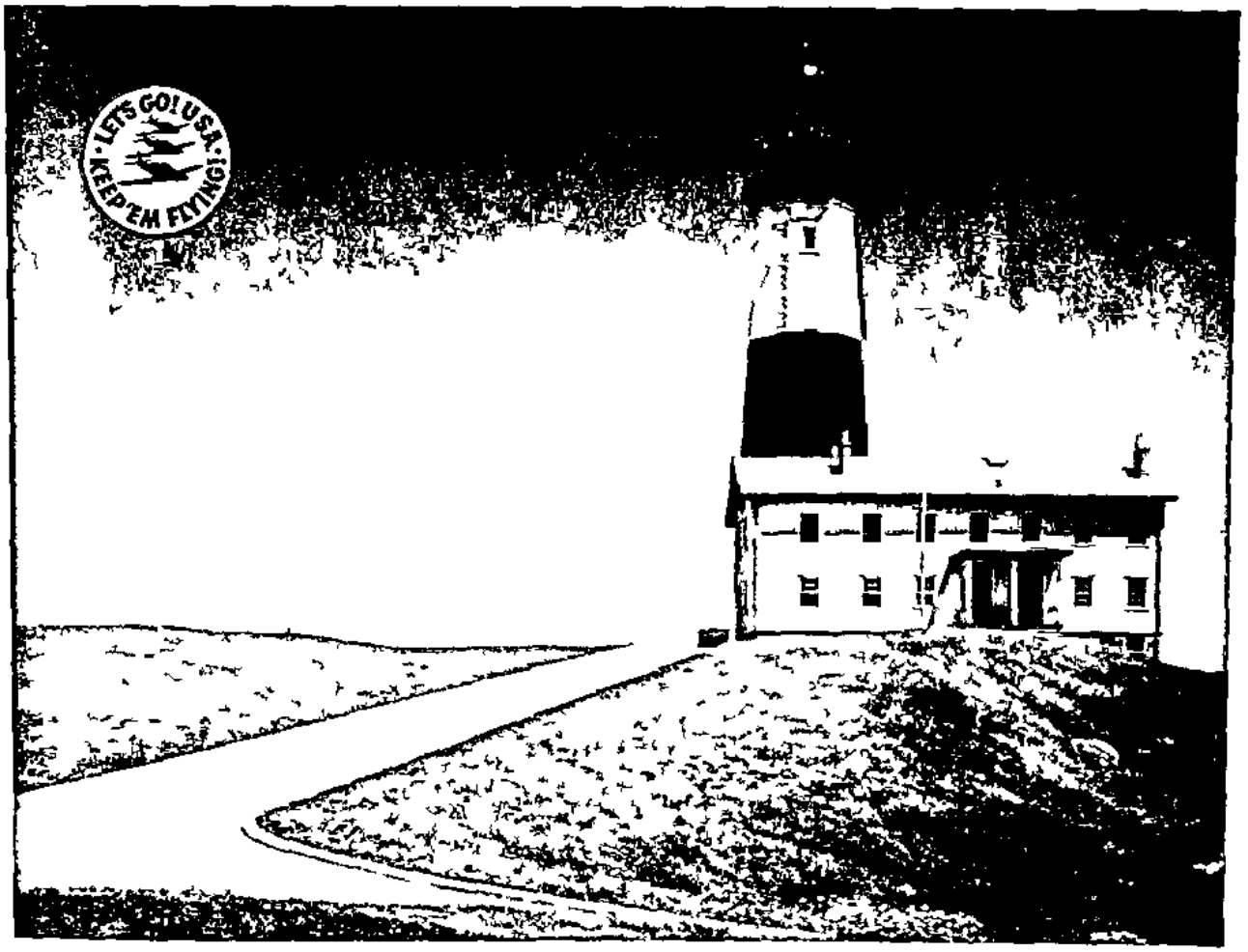
This dream was filmed on a stage 85 by 185 feet in size The effect of the characters walking on clouds was done with heavy vapor which clung to the floor When a chemist demonstrated this new effect, someone said it smelled terrible The man asked 'What odor would you like?' and the joking reply was raspberry" When the vapor was finally delivered it actually smelled like raspberries—the chemist did not understand Hollywood kidding

All scenes in and around the gas works and around the railroad tracks were written to take advantage of the real places after writers had seen the sites The gas plant had been idle for fourteen years and could have been used at any time by a movie company Then Paramount decided to put it to its first use wrote its script for the site and then was notified that the plant was starting up production and the studio had three nights *right now* in which to get the scenes

Railroad station arrival scenes were made at the old Southern Pacific station now not used since the Union Station was erected in Los Angeles For the swanky Neptune Club $6000 worth of tropical fish was rented to swim in the huge bowls around the room

Scenarist Albert Maltz did a complete life story" and character analysis of every character in the picture even to the briefest bits so that every actor would have a guide as to what sort of person he plays and what points are to be gotten over

Most amusing note about the story The picture takes place in San Francisco and Los Angeles All scenes in San Francisco considered by Los Angeles as the fog belt of the West are in the brightest of sunshine All scenes in Los Angeles the "land of perpetual sunshine' take place in the goldarndest rain storm and thick fog ever a man saw



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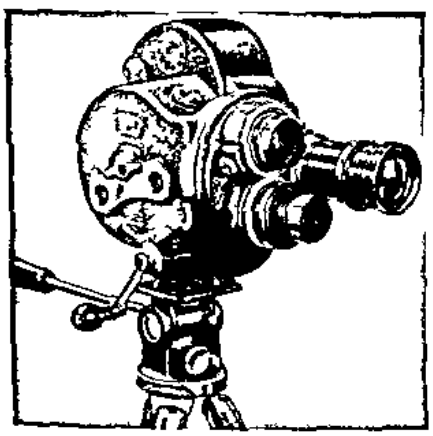


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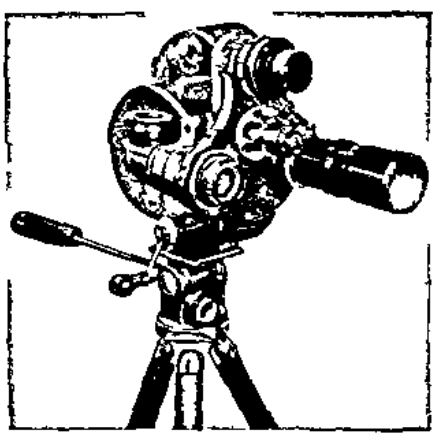
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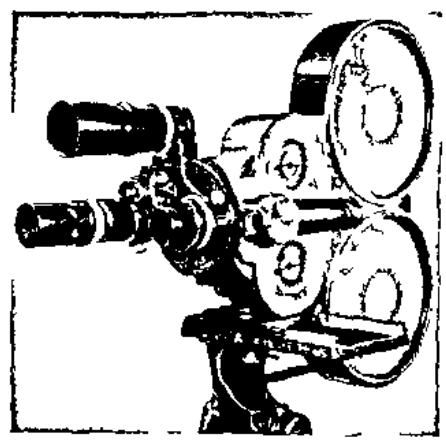
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Editor, HERBERT ALLEN
Business Manager, HELEN BOYCE. *Art Editor*, JOHN CORYDON HILL.
Contributing Editors D K ALLISON, GEORGE HURRELL, CHARLES SAXTON ROMAN FREULICH, ERNEST BACHRACH, ALVIN WYCKOFF, WILLIAM V DRAPER, FRED GATELY, GEORGE SCHEIBE.

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INTERNATIONAL PHOTOGRAPHER, as the monthly official publication of International Photographers, Local 659, of the International Alliance of Theatrical Stage Employees and Moving Picture Machine Operators of the United States and Canada, not only represents the entire personnel of photographers engaged in professional production of motion pictures in the United States and Canada, but also serves technicians in the studios and theatres who are members of the International Alliance, as well as executives and creative artists of the production community and executives and engineers of the manufacturing organizations serving the motion picture industry INTERNATIONAL PHOTOGRAPHER assumes no responsibility for the return of unsolicited manuscripts or material

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Toni Favor



By Ira Hoke

UNCLE SAM TAKES THE OFFENSIVE

By Mervyn Freeman

Mervyn Freeman newsreeler who covered the attack on the Gilbert and Marshall Islands for Pathe News ground out pictures of the battle from a perch near the warship guns where he lived for three weeks. He started out with cameras around this perch but soon these were known to shreds by concussion. This is Mr Freeman's fourth war. He served as a photographer in the signal corps during World War I, as a newsreel cameraman in the Mexican Revolution in 1914 and in 1932 he was with the Japanese Imperial forces and Navy as a photographer in the vicinity of Shanghai.

Freeman points out that "shooting" a battle from a ship is nothing like photographing on land. he says on land the cameraman usually can find some vantage point where ALL the odds are not be against him. Aboard a ship in the enemy's territory leaves the cameraman somewhat in the position of a concentrated target.

Early in the morning of February 1 our ships neared the target, the Wotje Atoll. As the lookout passed the word, "Land ho, dead ahead" we were within twenty miles of the island. The air was tense, every man was alert at his station for the fatal command "COMMENCE FIRING!"

As we approached at a fair speed dawn broke over the palm studded beach. We saw before us what might be called a beautiful peaceful, tropical island. White birds, like tiny swallows that might have been whitewashed flew overhead. We were within ten miles of the shore, the Japanese still were unaware of our nearness, our ships turned broadside to the island, still cruising at a fair speed.

THEN—all hell broke loose. Our big guns started firing; the island seemed turned into a seething volcano as the giant shells found their mark and sent up massive volumes of water and earth. The Japs then went into action with their shore batteries and guns hidden in the tropical coco palms and breadfruit trees. Shells started to fall around us, falling short of missing their mark, our ship. We were now cruising about eight miles from the beach, the early morning sun now was absorbing the light haze and our visibility was perfect revealing the artillery on the beach for the length of the island, a distance of about two and a half miles.

Our big guns were firing with a staccato that began to sound like a greatly amplified lullaby, the island seemed to shudder as shells embedded themselves deep in the coral formation then exploded with a thundering rebound. The Wotje Atoll and its 10,000 soldiers and marines were now learning for the first time what the "Rising Sun" really stood for when assisted by the United States Navy.

The little yellow men were trying hard even to the firing of anti-aircraft guns. Shells burst in front of us and over us, tiny pieces of shrapnel marked our decks. Now was the time for our own anti aircraft batteries to go into action. First a few shots were fired at the shore batteries to determine our range, then faster than a steam calliope in a circus parade our steel monsters let loose a barrage that ended a long line of Japanese artillery that never will fire a single shot.

Our ships turned again toward the shore bringing us within a distance of about four miles. our guns were silent but not for long. As we straightened out for the next run the range was set again and we fired with such fury that the ship was vibrating from bow to stern, tearing steel plates from its own sides, creating the motion of a prolonged earthquake of no uncertain intensity.

Then a submarine periscope was sighted off the port bow. Word was passed on to a destroyer to hasten to the spot and attempt to destroy this Japanese "fish" with depth charges. We carried on giving the enemy a steady baptism of fire—three large 'fishes' were burning now. The first large underground oil tanks were sending up immense columns of smoke and as a new tank started it let loose with a terrific blast. The next two fires revealed from their explosions that two ammunition dumps were doing their best to destroy themselves. Our air force was under heavy fire, too, from the anti aircraft batteries in the inner harbor, but they laid their 'eggs' just as calmly as a prize laying hen in a secluded coop.

The island now began to take on the

TONI FAVOR, PHOTOGENIC FIND

Will Toni Favor, currently playing in "Life With Father" at the Music Box Theatre in Hollywood, prove a second Janet Gaynor? Among those who prophesy that she will is Ira Hoke, still photographer, who made the studies of Miss Favor on the facing page.

It was this same Ira Hoke who discovered the possibilities of Janet Gaynor a year or two before she was taken over by Fox. That young woman then was working as an extra with Alberta Vaughn at the old Film Booking Offices which preceded RKO.

Toni Favor has the same wholesome vitality and sparkle and is acclaimed by Mr Hoke to be the greatest photogenic find since Janet filled the coffers of box offices some years ago.

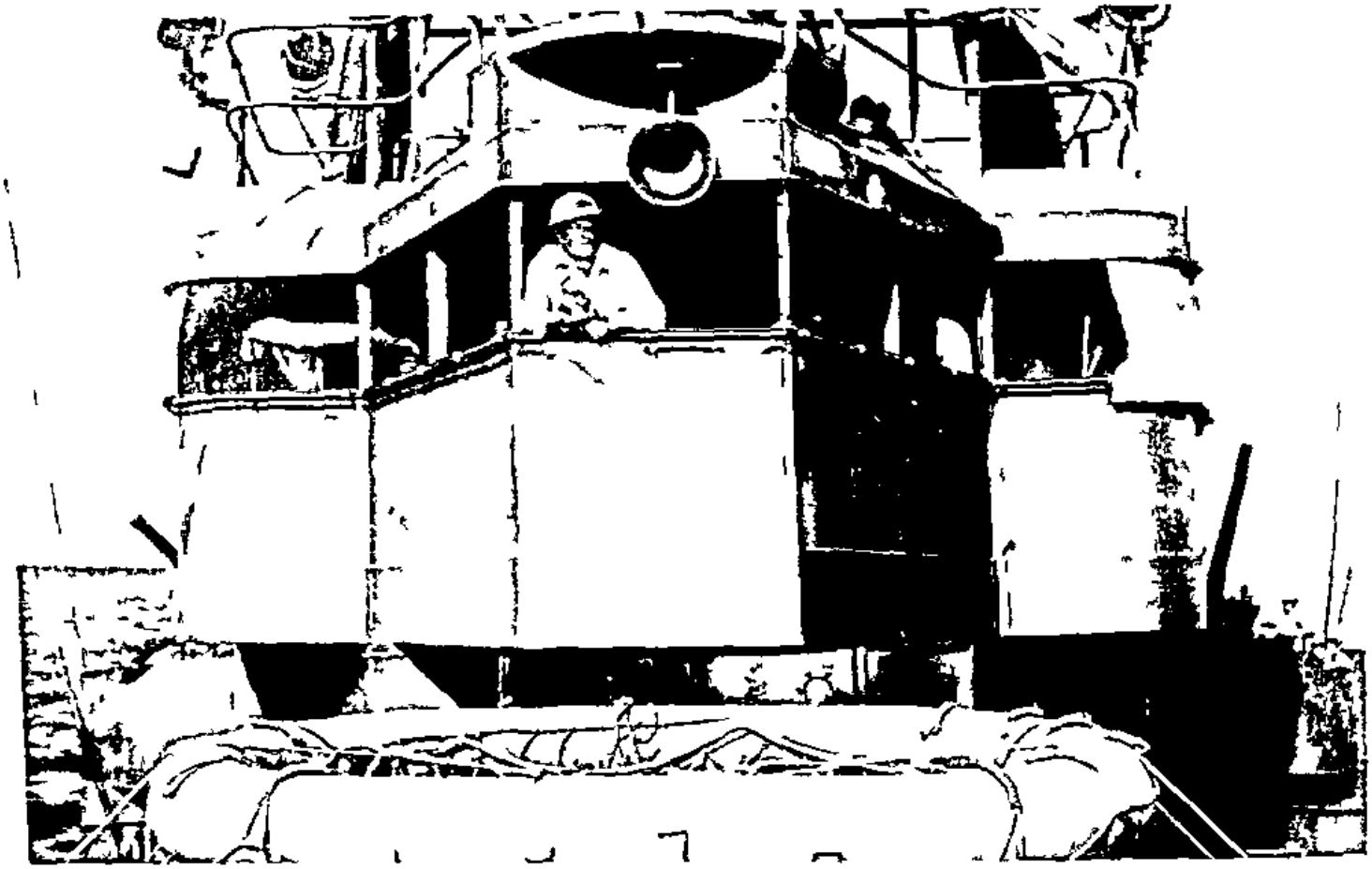
Toni is a golden haired blue eyed native of Connecticut. She has not yet appeared on the screen. In fact the portraits on the opposite page are the first that have been made of her. Someone told her that she "really ought to have some pictures." She wishes to send her father one of them. He is not at all in accord with her idea of a career, so she is seriously trying to select the one "that makes her look most intelligent." She says her father just doesn't like women that don't look intelligent.

Toni attended the American Academy in New York for a year, then decided to join a summer stock company at White Plains. She has appeared in several plays with Grace George and Ezra Stone.

Obtaining a part in a play is just like getting any other job with Toni. That's the way she got her part in "Life With Father." A young man she knew—he had a walk-on part in What a Life—one day suggested that she go over and try for a part in "Life With Father." She did. The casting director put her to work studying and rehearsing it for three weeks. Now she has been appearing in it for a year and a half. The young man who played opposite her last year was Richard Ney, who later had the juvenile lead in "Mrs. Miniver."

Toni greatly admires Dorothy Gish and Louis Calhern and says she has learned a great deal through her association with them.

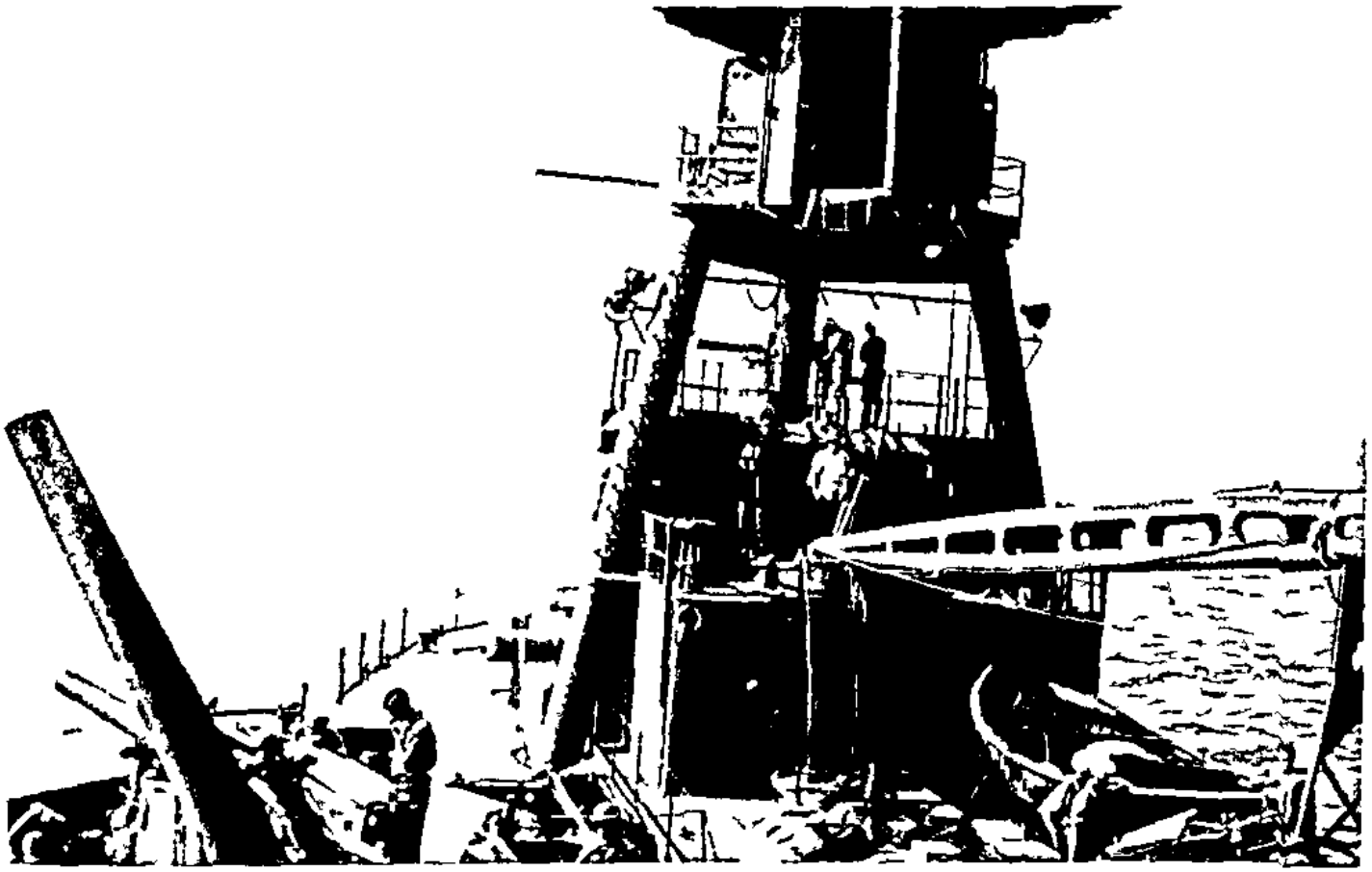
When the play closes here Toni plans on returning to her home in the east. This very practical young woman says she has "never starved nor endured hardship for the sake of art." If she gets into motion pictures she will be very happy about it but if she doesn't well she still will be happy because she feels there will be a part for her on the legitimate stage. And that will give you an idea of Toni's happy philosophy.



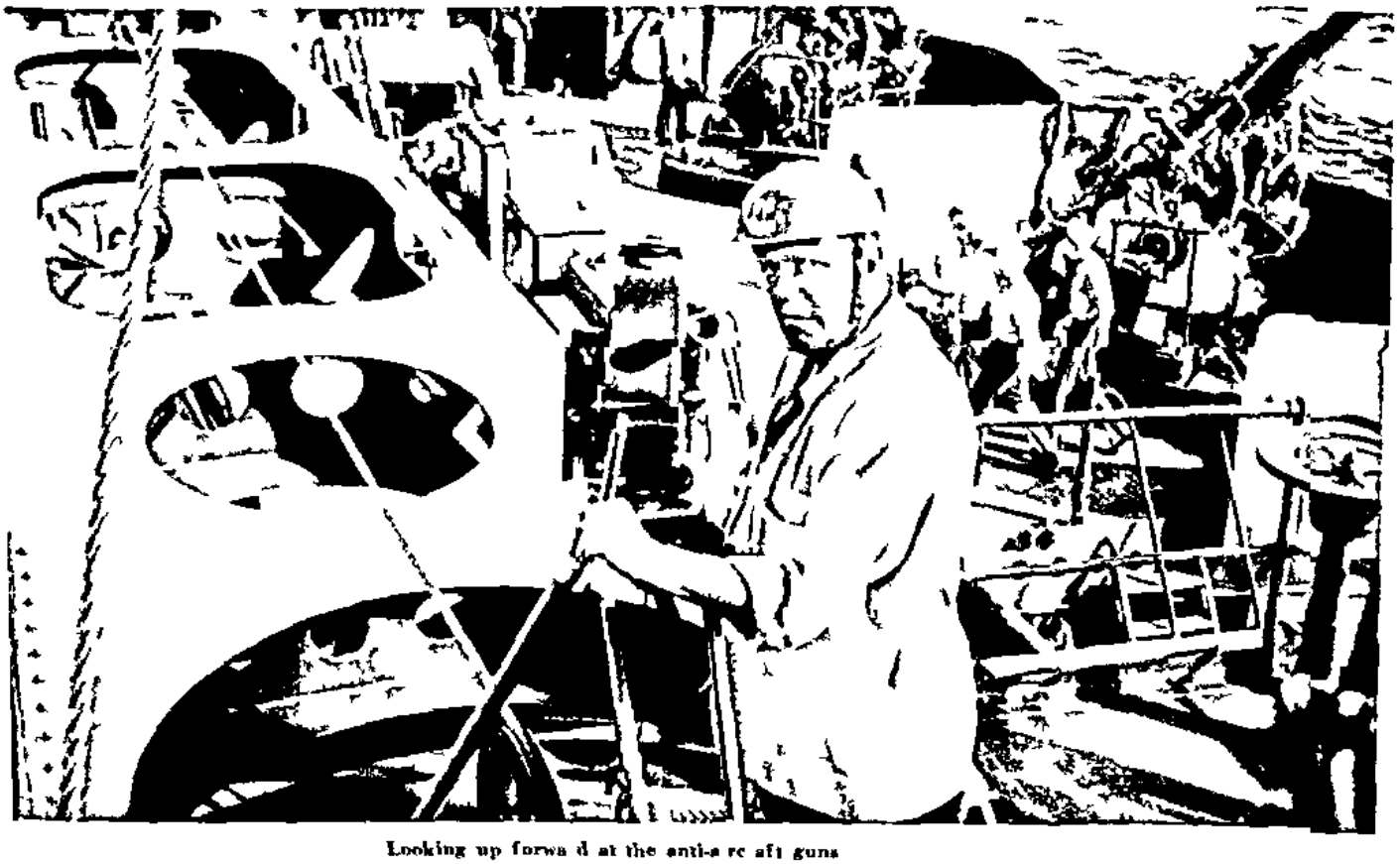
Low shot from top rear gun turrets. Freeman's "cabin" is behind the canvas at the right



Inside the "cabin" with Freeman resting on his makeshift bed—a light mattress thrown over a large packing crate. Inside this crate with openings for air circulation, are the newsreel cameraman's supplies, while at the foot of the box bed are cases and steamer trunk containing equipment and clothes.



Boat crane deck on which the newsreelers quarters were located. Hardly discernible is the camera at the left operating [illegible]



Looking up forward at the anti-aircraft guns



According to an order passed by the Geneva Conference some years ago all correspondents and newsreelers must be dressed in army officer's uniform, with overseas cap gas mask and helmet when they land

appearance of a massive hell hole with three large troop ships sunk and one badly listing at the mouth of the entrance to the inner bay while one ship weighed anchor and under terrific fire steamed for the beach where she went aground upon one of the many hidden coral reefs.

Aboard our ship officers and men were carrying on with clock like precision Every move counted while feeding the fast firing anti aircraft guns that continued to hammer on the island The only seeming disorder was the mounting pile of brass shells ejected from the guns after they had discharged their steel jacketed dynamite They were strewn around the deck and the men assigned to pick them up were swamped to their knees in brass cylinders still hot from the heavy powder charge

Not far off other ships were firing with intense fury as though they were trying to blow out their very insides at the many little yellow men partially hidden in the tall drab cocopalms that seemed to sway and groan with the impact of every shell that burst

The sky watch reported the appearance of enemy planes flying at such high altitude that they were not visible to the eye We started zig zagging now to confuse our enemy in the air Meantime the Japanese almost reached our range as more shrapnel burst around us and peppered our decks Shells whistled overhead and landed in the churning water to the rear But our crew of fighting men carried on unheedful of Japanese fire and continued the annihilation of this island military population

During a brief lull my mind wandered to the shores and interior of this beautiful island It could not be possible that anything could live under such withering fire But these little yellow men like the yellow plague kept coming forward then as the morning passed their fire seemed to slacken as our guns kept roaring on to the tune of "Yankee Doodle" I wondered what the next order would be Would it be nearer the shore with its hidden reefs, large coral formations jutting up from many fathoms of water and still not visible below the surface a menace as dangerous as submarine infested waters or mined areas but on we went our ship guided by a navigation personnel second to none Suddenly our ship turned and headed out to sea with the rest of the force following

After two hours the men who never seemed to be exhausted proceeded to put things in shipshape aboard the ship A survey showed that our ship had come through without casualties its only battle scars being caused from our own heavy gun fire—the damage one radio antenna blown down

The patrol seaplanes now were returning and a check up proved all hands present and accounted for From now on it was a question of speed—and more speed

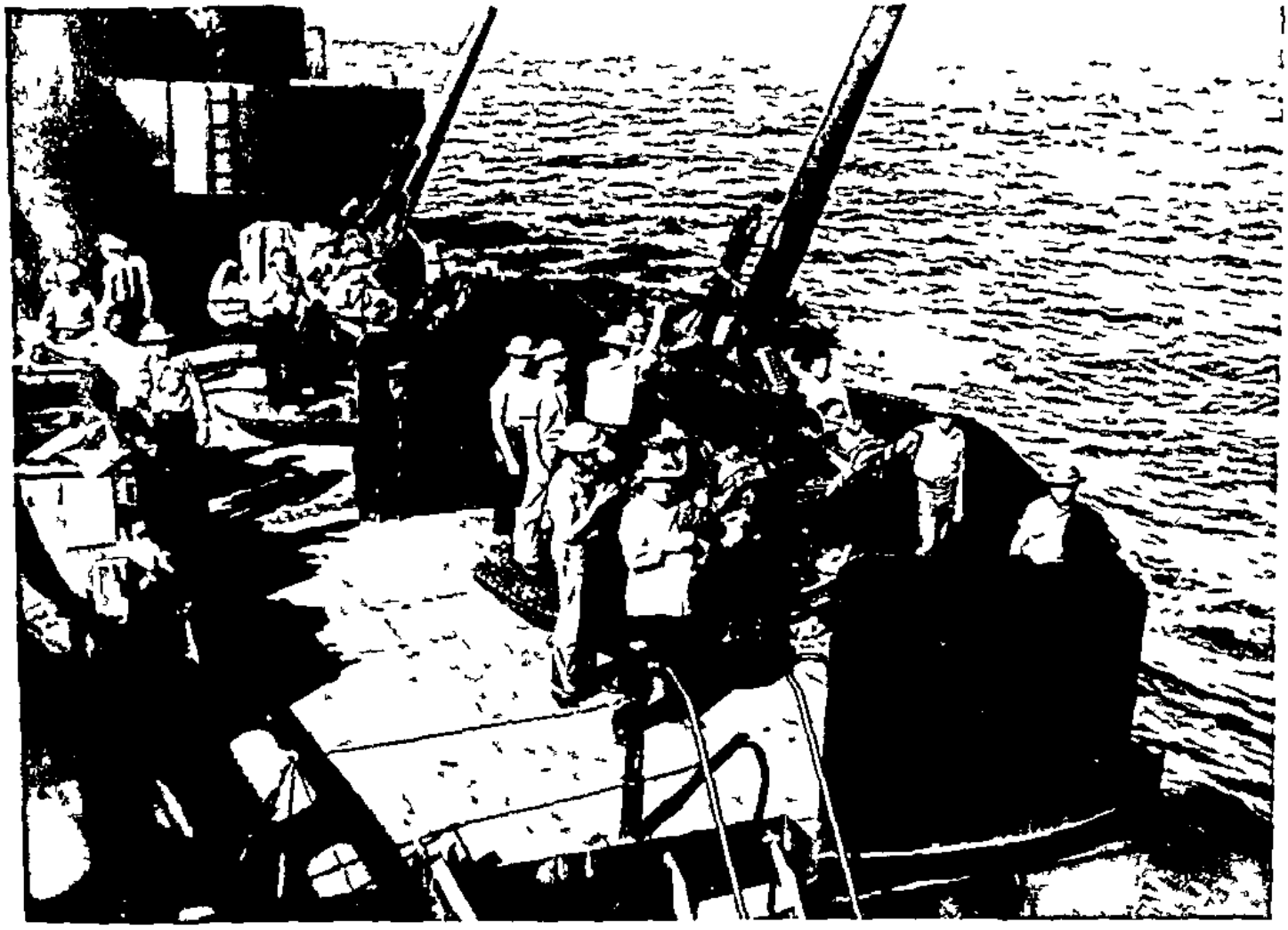
Suddenly six twin motored bombers appeared overhead Quickly the anti aircraft battery swung into action Three of them were brought down while another was badly crippled

Many hours had passed As it neared sunset the lookout shouted "Submarine periscope sighted off starboard bow" Our ships immediately made forty five degree turns from right to left It seemed incredible—then into complete circles around our airplane carrier Then crazily we started making turns again The sensation was that of an automobile at high speed turning a corner on two wheels Then our pace slackened as we hunted for some trace of this Jap fish but it had submerged to an unknown depth

Once again relaxed but always on the alert our force fell into battle formation heading for our base Far beyond the sun was dripping below the horizon nothing but its flaming red reflection could be seen against a bank of billowing clouds

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Another view of the anti-aircraft guns, Freeman with his camera in the foreground

TWELVE TIRES do WORK of 150

Movie co operation with the national war effort to save both rubber and gasoline *operated* to make Allan Dwan's movie company arriving at this outpost high in the wooded San Bernardino Mountains to film a picture on location the strangest cavalcade of the sort ever seen

Dwan both producing and directing Here We Go Again for RKO Radio brought a cast and crew of close to a hundred headed by Fibber McGee and Molly Edgar Bergen and Charlie McCarthy the Great Gildersleeve Ginny Simms Ray Noble and his band

In other days and not so long gone at that the stars would have driven the 100 odd miles from Hollywod largely over devious mountain roads in their own high powered motor cars The director would have done likewise the assistant directors as well as most members of the crew

For California is a motor conscious land of magnificent distances where everybody drives Besides the only way to get to Big Bear in the heart of the big pines is by private transportation

So there would have been thirty or forty private autos Just as always on movie location jaunts—in the past Instead though three big buses brought them all Twelve tires doing the work of 150

Besides said Dwan by coming up here for a lengthy stay to film much of our picture we're saving materials Instead of building studio sets out of things needed in the war effort we're using back grounds already provided by Nature

So the stars rode with the labor gang the grips with the producer director in the first Share a Ride location jaunt in movie town history

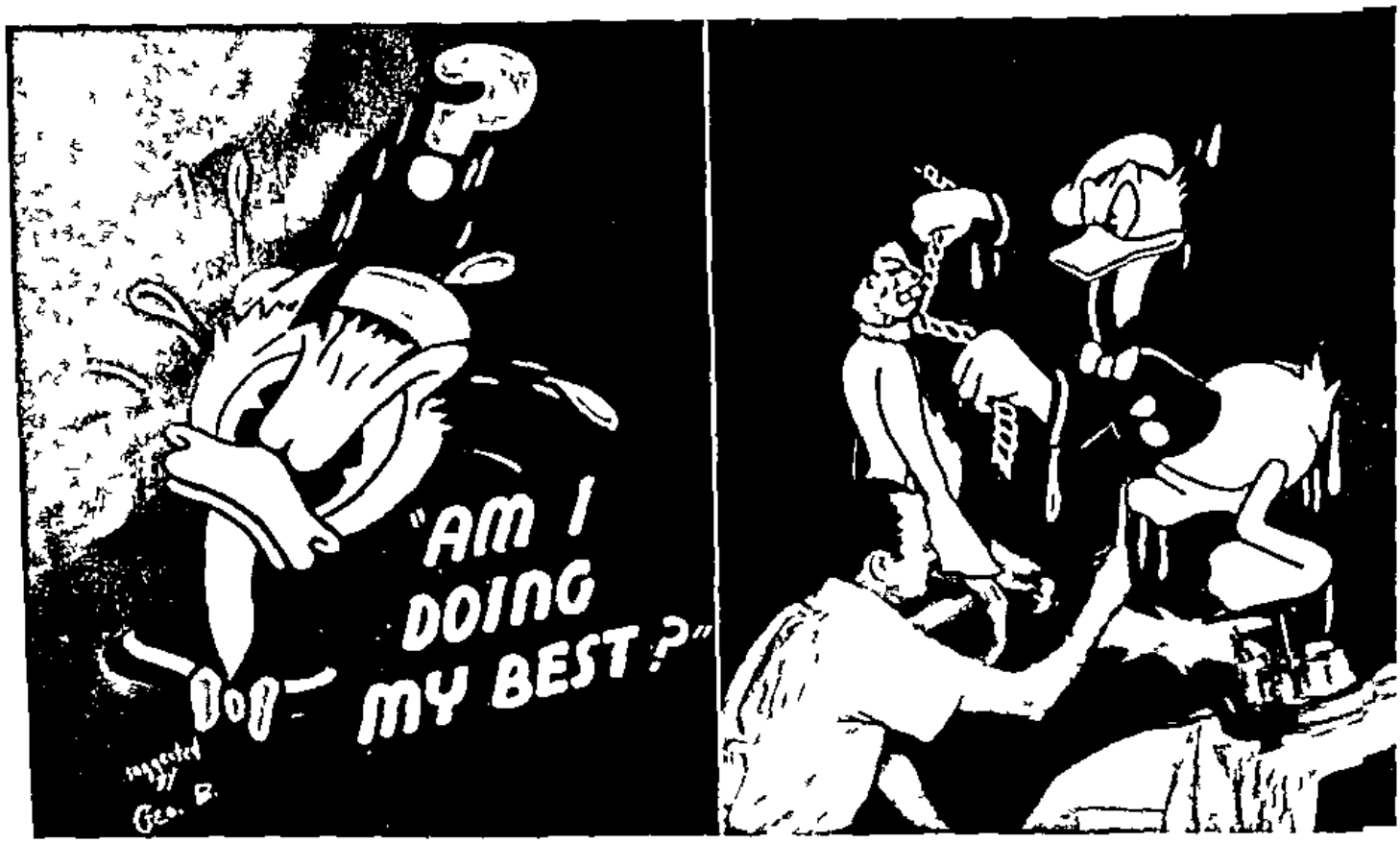
Before setting out moreover Dwan and his production assistants checked and rechecked equipment lists to make sure no item was overlooked for which a supply car later might have to be sent down the mountains and back to town

There just won't be any supply car jaunts was the dictum Dwan laid down The groaning truckload of equipment, therefore contained everything from a can of greasepaint to the big pieces of sound equipment

And not a thing it developed had been overlooked Of course some properties as the movies quaintly term any and all articles used in the making of a picture had not been brought from Hollywood—but for a very good reason The Prop man arriving in advance and scouting around among isolated mountain farms and hamlets had found several required items right on the ground

One was a two seated surrey of 1890 vintage In this Fibber and Molly were to drive behind Lillian to a mountain resort to celebrate their twentieth wedding anniversary Conserving gas and tires too you see

donald duck GOES TO WAR



That beloved irascible little guy Donald Duck has signed up to help lick the Japs Picture at right shows Vega artist George "Randy McCraw who conceived the idea and now spends all of his time painting different cartoons of the fighting little duck as well as Horace Horsecollar Dumbo and Goofy on the sides of airplanes

George "Randy McCraw formerly an advertising layout man started work at Vega as a spray painter Later he was given the job of painting the British R A F insignia and the U S Army Air Forces star on the planes But Randy had ideas of his own too His amusement, his contempt and ridicule of the enemy needed some outlet So—one day at noon Randy started to draw funny cartoons alongside the insignia Of course he rubbed them off but other employees and the management began to express interest. Now he devotes eight hours a day in painting on the sides of the ships Donald Duck Horace Horsecollar Dumbo Goofy and other comic figures

To create personal interest in each ship the idea of identifying each Ventura with a cartoon has caught on tremendously with Vega employees according to L. M Bach works manager Suggestions from employees have been pouring in at the rate of 100 a day and special suggestion boxes have been placed throughout the plant for this purpose

The British have given their permission for this and the Venturas will go into battle still bearing the curious cartoons Walt Disney has given his permission to use any of his famous characters but many others are used also The first was the head of a Jap with a bloody dagger clenched between his teeth and captioned Used at Pearl Harbor"

One of the most popular cartoons shows Donald Duck wielding a large sledge hammer and saying "Let me have a quack at em" Another shows Donald giving Hirohito a necktie party while another shows Donald holding his mouth shut and pointing to the words "Close-e trap-e fool-e Jap-e

In still another the hand of Uncle Sam ladles out a dose of Coral Sea poison with the caption More of this will soon cure em One shows Mickey Mouse with a war bond which is labeled A token for Tokio while another describes a Ventura as Another nail for Hitler's coffin" In another Donald Duck asks himself "Am I doing my best?

Also striking a practical as well as patriotic note at Vega is the custom of naming thoroughfares in the plant after war heroes and battle locations "MacArthur Boulevard with an arrow pointing to Rome Berlin and Tokio "Pearl Harbor Drive Bataan Boulevard and Burma Road are within the plant street signs constantly reminding the Vega employees what they are working for All these ideas are those of the workers themselves

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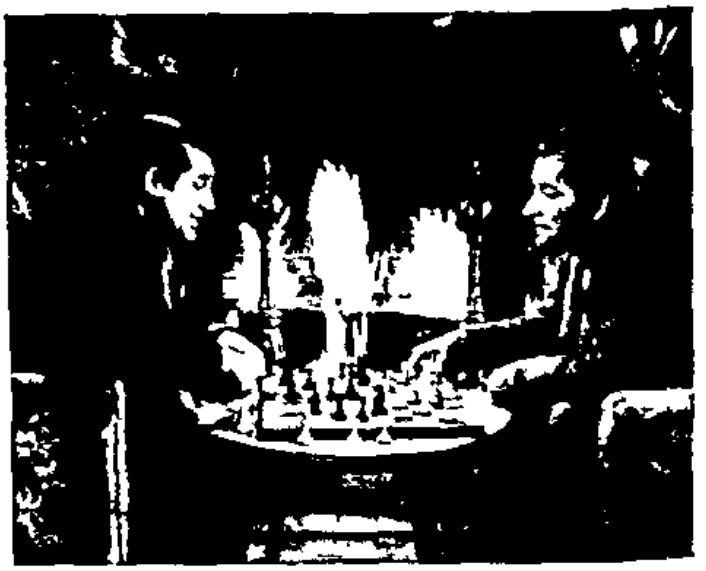


Tim Holt and his "best friend

By Alex Kahle



Dlg Cary Grant) escape before a verd t n his trial and per uades Nora Shelley (Jean Arthur) to h de h m



He is ntroduced a a gard ner to stuffy law school d an Light cap (Ronald Colman) and they become fa t friends.



L ghtcap finds out Dlg s den ty and s torn between his dutv and friend h p He dec des he must phone the pol ce



D lg a v a n escapes. No a s nfluence makes Lgh cap more toler ant so he shaves off h s hea d and goes to D lg s rescue



Lgh cap goes to town finds the foreman supposed to be dead, gets his confess on, and n th courtroom scene D lg s freed.



Lghtcap s ad entures peed h appoin ment to the Supreme Court bench and he sends Nora to Dl g who l ves and needs her

"THE TALK OF THE TOWN"

The Talk of the Town concerns Leopold Dilg (Cary Grant) a woolen mills workman who believes that law is all for the upper classes When the mills burn down Dilg is accused by the mill owner Andrew Holmes of being responsible not only for the fire but for the death of a foreman Bracken

Before a verdict is reached in his trial Dilg escapes and takes refuge in a house belonging to Nora Shelley (Jean Arthur) who is readying the house for summer occupation by Michael Lightcap (Ronald Colman) a stuffy dean of a large law school

Lightcap arrives a day earlier than expected Nora hides Dilg in the attic then makes arrangements with Lightcap who is anti-everything except law to become his housekeeper and secretary She does this to protect Dilg whom she believes falsely accused

Finally when Dilg is forced to make his appearance Nora introduces him as the gardener After some brisk conversational encounters Dilg and Lightcap become fast friends Lightcap does not know Dilg's identity As their friendship ripens Dilg begins to have more respect for law and order while Lightcap begins to see that there is more to life than musty books on law to which he has devoted his life

Information arrives that Lightcap is to be appointed to the Supreme Court Bench, an ambition he has nurtured all his life Shortly after Lightcap learns that the supposed gardener is actually Dilg Torn between his duty and his liking for Dilg he finally gives in to his training and starts to call the police Dilg knocks him out and escapes

By this time Lightcap is falling in love with Nora who talks to him about forces in people which never can be learned from books

Lightcap takes a drastic step He shaves off his beard and goes into town to make the acquaintance of Regina Brush former girl friend of Bracken From her he learns that Bracken is still alive

When Lightcap returns to his cottage he finds Nora and Dilg there He tells Dilg that he is going to turn him over to the police but that he will do everything he can to help him Dilg agrees

In Boston Lightcap captures Bracken but before he can turn him over to the police he escapes Dilg's trial resumes but no one will believe that Bracken is still alive When mob violence threatens Lightcap decides to take matters into his own hands He goes to Regina's beauty parlor and there at gun point captures Bracken With Bracken's confession that he had plotted with Holmes to burn the mills for insurance money Dilg goes free

To his amazement Lightcap's adventures speed his appointment to the Supreme Court bench Realizing that Nora really loves Dilg on the day he ascends the bench he tells her to go to him

Now happily married to Nora Dilg becomes incensed because park benches have been removed He starts to make a soap box speech as a policeman grinning enters the scene



HE USED TO BE A CAMERAMAN HIMSELF So George Stevens producing and directing Columbia's "The Talk of the Town" always lines up the cameras personally before filming a scene

photographing "wake island"

By George Lancaster



That's George Lancaster behind the mask He's merely demonstrating how a well dressed cameraman appears at the Salton Sea, where the crew battled blinding sandstorms and a temperature of 120 degrees during filming of "Wake Island"

Extremes in shooting conditions met in the photographing of Paramount s 'Wake Island"

At the Salton Sea where thunderous land battles were filmed the elevation was 250 feet below sea level—the lowest point on continental United States

Over the Great Salt Lake spectacular dogfights between "Japanese" and Ameri can warplanes were filmed at an altitude of 11 000 feet

The camera crew at Salton Sea sweltered as the mercury climbed to 120 degrees The aerial photographic unit at the Salt Lake wore heavy clothing in working in a temperature of zero Beside the Cali fornia sea the cameramen battled blinding desert sandstorms In Utah they were up against cold and rain

Theodore Sparkuhl was director of pho tography at the Salton Sea location and Elmer Dyer was in charge of the aerial photography at the Great Salt Lake

A giant DC 3 transport plane, equipped as a camera ship was used by Dyer in photographing the dogfight scenes By re moving the two large side doors of the transport a wide shooting range was ob tained for catching the lightning fast action

The Japanese ships were low winged Ryan monoplanes painted to duplicate the Zero fighters of the Rising Sun air force For Marine fighters Grumman planes were used And right there was the first big problem The Grummans, hitting a speed of 250 miles per hour without half trying, were so much faster than the Ryans, which managed 125 MPH pace, that difficulties in sychronizing the action had to be over come

The pilots and Dyer went into a huddle before the day's shooting and mapped each move of the planes step by step so that the faster and slower ships would be in focus simultaneously The moves were charted on a blackboard and rehearsed with tiny toy planes on a table top The swift Grum mans were throttled to the lowest practical flying speed and wing flaps were put down to further retard the pace when the action got under way

The camera was trained mostly at up angles in order to obtain the most effective shots and to eliminate a land horizon Be cause of the zero weather Dyer lubricated his camera with whale oil of low density—as a protection against congealing of the fluid

The Salt Lake City unit ran the gamut of weather, rain, snow and sunshine On the good days the camera had to make up for the bad days when shooting was cancelled

On most of these fair days massive silver clouds cooperated by forming gorgeous backgrounds for the photography The warm air rising from the lake was trans formed into the shifting cloud shapes upon reaching the cold strata of the snow cov ered mountain tops surrounding the lake

The aerial photographic expedition was conducted without an accident to man or machine But the pilots of the 'Japanese" planes learned afterward of one hazard they escaped A machine gunner at the nearby Army Air Corps airfield confessed he developed an itchy trigger finger every time he sighted the 'Zero' ships overhead

The scene now changes On the hot desert waste where Paramount artisans have created a second Wake Island, Spar kuhl and his crew are focusing on Japanese landing boats, crowded with dark skinned Nipponese troops Suddenly from across the desert rolls a gray, thick cloud, beat ing a wide swath through the sagebrush

The sandstorm beats the Japs in and drives the "Wake Island' camera crew to cover They move the camera into a wood en shelter to shield it from the pelting sand particles which if they sifted inside the camera covering would pit delicate parts

The next day the camera is photograph ing the bombardment of Wake Island Huge charges of dynamite blast craters in the sand, sending showers of debris flying in all directions Once more the camera is hidden behind its barricade to protect it and its operators against the avalanche of sand and dirt from the explosion

Here at Salton Sea also no accidents mar the filming despite the hazards of high ex plosives, buildings set afire by incendiary attack and windstorms which topple sets

'Wake Island' is the first factual film drama to be made by Hollywood of Amer ica at war It is being produced as an au thentic story of the historic defense of America's Pacific outpost by a gallant band of Marines fighting against over whelming odds

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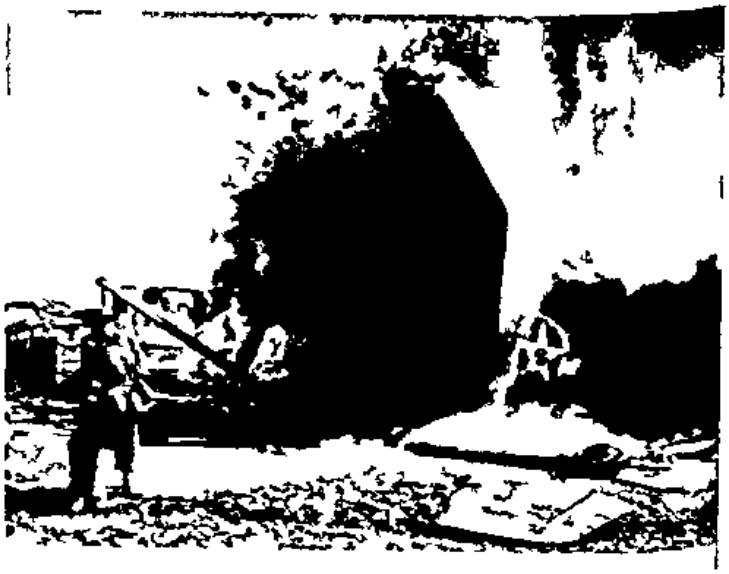
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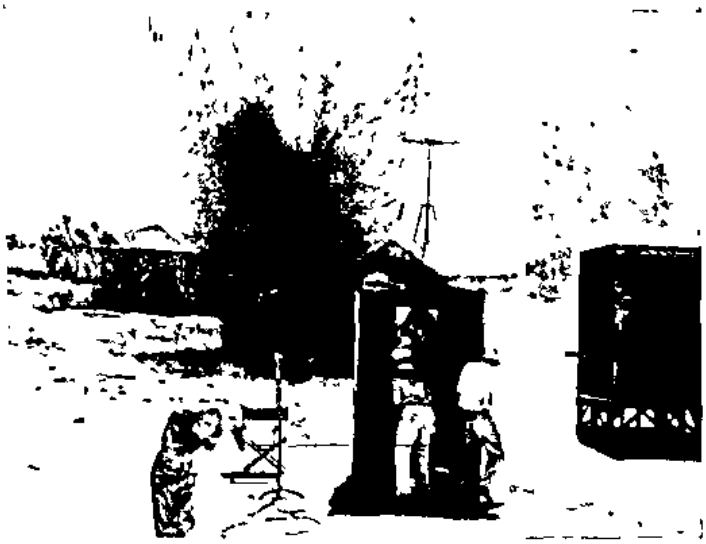


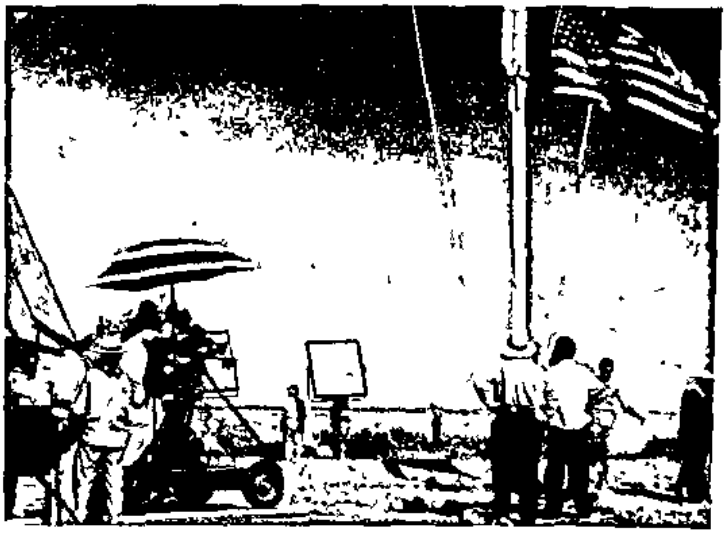
Pot ay n the l o Ma ne offi rs and men of Wake a e B a D nl vy Rob- Pres n Ma donald Ca ey W iam Bend x Wal e Ab l and M kha l Ra sumny n l ad n oles A be t D kk

Stills by G. E. Richardson and Talmage Morrison













plays the part of a civilian contractor, a hero also. Barbara Britton portrays the bride of a Marine flying ace. "Wake Island" is being produced by Joseph Sistrom, with John Farrow directing.

With Hyman Fink

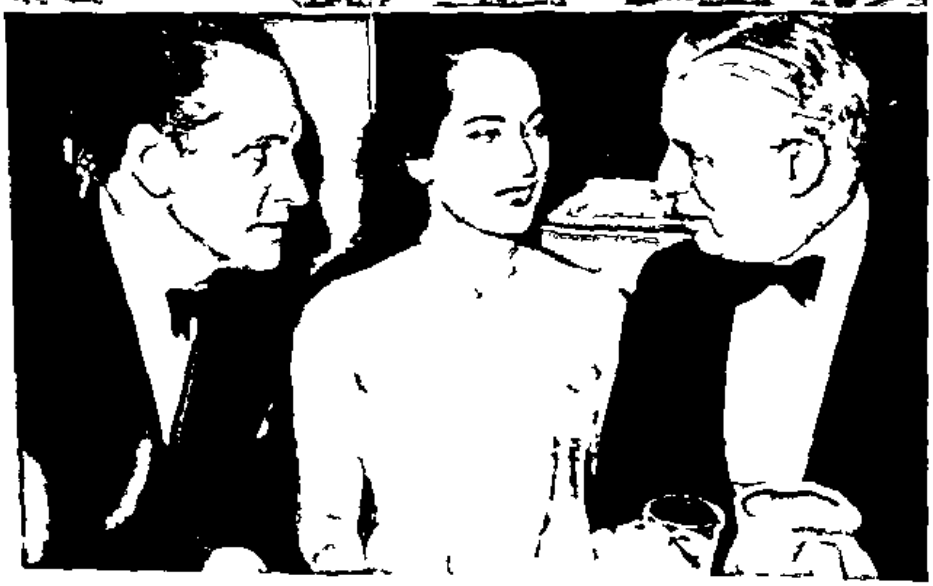
Staff Photographer
Photoplay Movie Mirror
and Radio Mirror



Victor Mature and Rita Hayworth at the Military Ball, Coconnut Grove Ambassador Hotel, given to obtain army and navy relief funds



Bruce Cabot and Dorothy Lamour at Military Ball She had 500 one dollar tickets *on a raffle for a* $500 war bond which she could have purchased for $375 Did she win? Ump-um, Mrs. Harry Brand did



Frederic March Merle Oberon and Charlie Chaplin at the Morambo









Upper left Mae We t e corted by Jack La Rue and J m T moth at the Lou ana R ht Mrs. Jules S e n Loretta Young and Bruce Cabot at the M l tar Ball Lower left, S r and Lady Alex Korda at the M l tary Ball. R ht the g rl Tan a Wyndrin tl e dog Brown e who e mo ng p cture career started w l Joan Crawford n Susan and God "

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EASE OF OPERATION CERTIFIED SOUND controls are simplified and centralized the entire System is operated and controlled from *one panel* The suppression of ground noise is automatic A microphone control and three other inputs are provided so that sound effects musical background from records etc can be combined while recording

PORTABILITY CERTIFIED SOUND establishes new standards in compact lightweight apparatus The recording amplifier and ground noise control amplifier high and low pass filter system and indicating meters are all built into one lightweight case The only remaining components of the System are the recorder power supply and microphone

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These are just a few outstanding features of the new CERTIFIED SOUND System To get the complete details send for our Technical Bulletin No 102 describing the Model 501 D Recording System for CERTIFIED SOUND and learn how easily and effectively YOU can take 16mm sound pictures

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Upper p cture shows cameraman Rav Jones pos ng Marlene D etrich and the lower picture is the fini hed result St lls bv Edd e Jones of Universal

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I. A. T. S. E. CONVENTION

By Herbert Aller

The arrival Columbus was nothing new t the delega e many of whom had traveled to all parts of the world Freu lich have been to Eu pe and Reinhold to Afr a and o down the line

Look g ar d it seemed for a while like H lywood grips electricians make-up n th lab group costumers, good old g p etc However after moving fr r up to group and talking with stage hands motion picture operators and various other theatrical workers the scene changed and it was now noticeable that the show business in its entirety had come to Columbus to talk things over

The delegates had the privilege of presenting to the convention Major Guy Newhard and Captain William Whitley of Local 659 now with the Army air force who were given an ovation

After President Walsh had read his report in which it was frankly stated that an election would be held old man politics came to the scene Thus it was that the same old game as well known in our national government state county and city municipalities was being played in Convention City

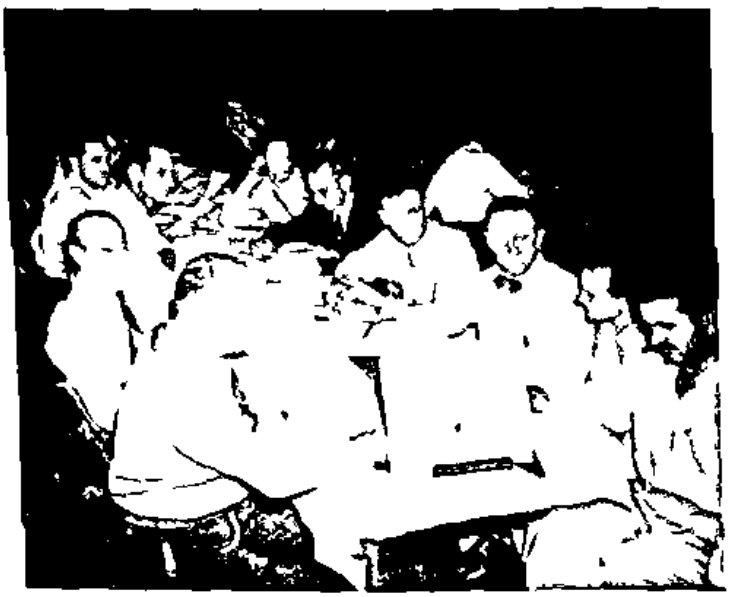
Resolutions saw their adoption as well as rejection Discussion from the floor



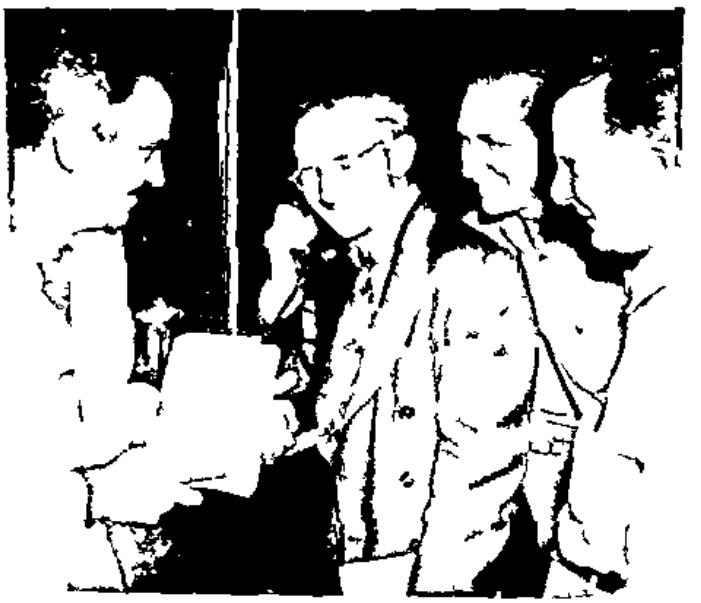
Convent on in progress with President Walsh on platform



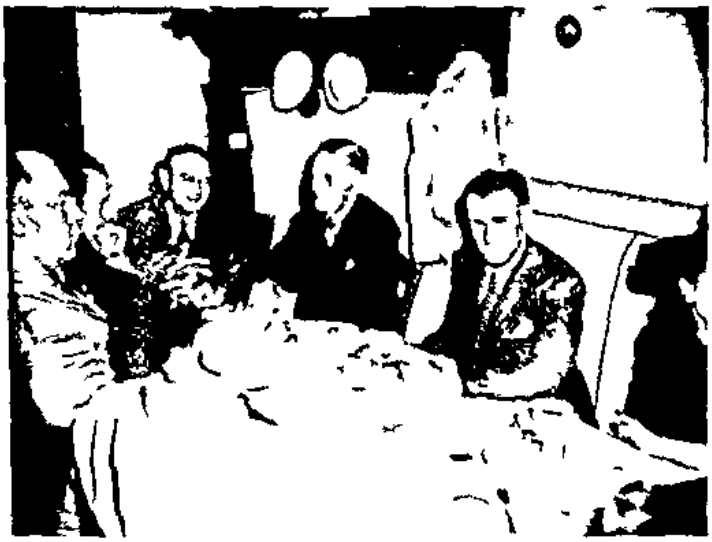
Richard F Walsh President of I A T S E



Left side of table Tommy McClellan (Local 122 San Diego) and Herbert Aller Right of table Buddy Weiler Roman Freulich Bob Coburn Cal Warrenton Bill Reinhold and Burnett Guffey



Burnett Guffey "Deuces Wild" Freulich at phone Buddy Weiler and Bill Reinhold





At dinner in Washington given for men in the service
Left picture shows Herbert Aller Gil Warrenton and Bob Coburn Picture at the right, reading left to right: Nelson McEdward, "Chuck" Cooper (Local 695), Bill Wheeler, Sam Moran, J C Brown, Herbert Aller, Gil Warrenton Thor Looves, Mrs Aller, Joe Lskins Robert Rhea Robert Johannes, Truman Woodworth

was received courteously and literally so that the men might voice their opinions That a thousand delegates can convene discuss and exchange views and act in a constructive manner is a credit to the I.A.T.S.E.

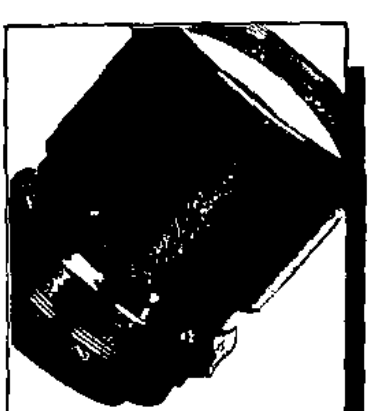
Election results trickled in about 8 00 P.M., announcing the re election of all incumbent officers Richard F Walsh President, Harland Holmden First Vice President, William P Covert Second Vice President, Floyd M Billingsley, Third Vice President, James J Brennan Fourth Vice-President Roger M Kennedy, Fifth Vice President Felix D Snow Sixth Vice-President Carl G Cooper Seventh Vice President, Louis Krouse General Secretary Treasurer

These men are worthy of support and will be given the cooperation of eight hundred locals The incumbents won in a fair and orderly election and represent the people's choice After picking up per diem checks the delegates began their departure Trains were at a premium Gas rationing and rubber shortage no longer permitted delegates to indulge in a few days side vacation

We moved on to Washington to see members now with the Naval Forces All asked about Hollywood their relatives and friends Surprised were some to learn about the retroactive pay A complete feeling of unity is felt among members of the local in this unit They are proud of their organization and their most hopeful wish is to see the organization well functioning when they return All asked for news and stated that they would like more letters News from Hollywood is as welcome as a cool breeze in Washington Many have been to sea while others are awaiting their call

Another group has a job to do in the lab in Washington where Lieutenant Halprin has performed a remarkable piece of work in organizing building and equipping one of the most proficient and streamlined motion picture laboratories Omitting details, but saying it properly the lab has everything In addition a small complete stage wired for sound

After paying respects to those loyal Americans who not only are giving time but buying bonds we moved on to New York City At Fort Monmouth Long Island our members now with the U S Signal Corps looked well and cheerful As a group they asked What's new at the local?" Lieutenant Ray Ramsey is in charge of the camera department where he is doing an excellent job It seemed rather odd to talk to men who have been around Hollywood most of their lives inquiring about the good old town Up to the minute news means much to these boys They look forward to letters from friends and acquaintances These men are part of the industry they have temporarily left They hope and pray they will come back to it in the near future and return to their respective jobs It's a tribute to the organization and to its various members to know that photographers of an organization like Local 659 have volunteered and are doing their share outside as well as inside the motion picture industry



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On the Subject of Lighting

There has been much written on the subject of lighting for photography, much of it good much of it unnecessarily involved That it is one of the most important phases of photography is beyond question for upon it depends the *quality* of the picture We believe that we can go so far as to say that it is the most important single phase *of photography and given the solid foundation* of correct exposure will determine almost within itself the feeling that the finished picture will impart

Lighting in professional photography is the keynote not only of the quality but of the manner in which a person set, or object will photograph Of course composition is important but the most perfectly balanced composition no matter how pleasing will be completely ruined by lighting that is either careless, inappropriate or improperly executed

It is possible to take any one person light him in several different ways and get several completely different results, by changing *only the lighting*, and nothing else A story can be enhanced a set made to look more beautiful a woman more appealing a villain more sinister and serenity more serene—all by the proper manipulation of the lights. By the same token it follows that these values can be ruined by the improper use of the illumination

When one mentions "lighting" it must *not be thought of merely in terms of mazda* lamps or arc lights working out of doors with sunlight poises as many problems in lighting as does an interior—and in addition is not nearly as easily controlled For the rank amateur it is important only that there be not too much of a lack light, nor a completely flat front light in the former case the contrasts will be too strong while in the latter the results will be too flat in addition to causing the subjects to squint most uncomfortably For this same amateur interior photography will require only two lights one used relatively close to the subject and the other somewhat further away It is true that there will be none of the beautiful highlights and shadows we like so well but it will give a record shot with the least possible effort and will not have the disturbing results that follow when a maze of lights are used unintelligently In this case one of the lights is placed somewhat higher than the subject's head if a close up is being made and the other light is placed somewhere near the camera filling in shadows made by the key" light. A meter reading is taken and the exposure calculated If on the other hand the scene he is shooting is a long shot or medium long then the lights are placed in such a position as to give as nearly an even illumination as possible

For the more serious worker however, the problem of lighting becomes the main consideration in photography and the means by which he is able to make a creative art of a machine. Working outside the most valuable adjunct is the *reflector*, made by pasting tinfoil over a flat surface of some three by four feet or larger depending upon the types of scenes to be shot and the material at hand Lights—"boosters"—could be used very well, where they are available but this is beyond the scope of the average amateur

In lighting with reflectors the sun can be used as a "backlight," with *all* the front light coming from the reflectors This is particularly pleasing especially where a scrim of light material can be used to hold back the sun a bit diffusing the light hitting the subject from the back Where reflectors are available (and every serious amateur should make it a point to get some) together with the scrim, the problem of "lighting" becomes one that can be con*trolled*

The most important thing to remember is that the lighting must be balanced—out of doors as well as indoors The amount of light kicking back from the reflectors must be strong enough to balance with the light coming from the sun, otherwise the effect will be too contrasty while if too much light is kicked back the result *will be too flat About the most pleasing* arrangement is to have the sun three-quarters of the way to the back—with the reflectors filling in for front light If it is possible to balance enough front light from the reflectors without holding back the sun a bit with the scrim, it will be more desirable to do it that way, because it is more often than not difficult to get a scrim of sufficient size for the purpose Not only that, but where more than one or two people are illuminated in close up, or if the scene goes to long shot it often becomes impossible to use a scrim at all

Inside it is a problem for lighting units. About the most important thing to say here is try to use as much diffused light as possible Open lights are hard, cause hard, sharp shadows and are not nearly so pleasing and soft looking in their results The basic idea is to have a "key" light somewhat higher than the subject, with a "fill" light near the camera filling in the shadows from the key light as the name suggests But it doesn't stop here Assuming that we have been working with a camera for a long enough time to recognize a condition that is either too contrasty or too flat for photography we balance the lighting between these two units by moving them closer or farther away until we achieve this balance Then, an embellishment can be added in the form of a kick light —which is usually a hard light of a small intensity placed over the head and to the back of the subject The greatest fault in the use of these kicklights is the fact that they are so often made too hot, and are out of balance with the rest of the lighting Here again about the only way to determine what is too hot and what is not hot enough is to try and try again until the desired results are achieved

Where a large room is illuminated, the problem becomes a greater one only because of the obvious increase of lighting requirements with the increase in area to be illuminated But, with the careful use

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of follow focus fast film and planned action, it is possible to actually hold the lighting requirements down to a minimum, and get some very satisfactory and beautiful results The secret of the thing is to hold the action to a central point illuminate that with one or two units and then use another unit for the background taking care to choose the camera angle in such a manner so as to include as little background as possible If the light illuminating the background is properly placed and used it should be possible to get by with one or at the most two, units Assuming of course that we are not trying to light up *too* large an area

At this point we would like to clarify the difference between the "key" of the photography and the lighting level Many of the advanced amateurs we have spoken with seem to have a confused notion of the two, some thinking that low level lighting is necessarily implies 'low key" Such is not the case We may have a high key shot photographed at a low lighting level and a low key shot photographed at a high level What determines the key is the contrast– plus the printing level' Generally speaking, high key work is low in contrast and light in the print Low key work is usually higher in contrast and printed dark

An important thing to remember in lighting is *smoothness* Make your lights *blend* from highlight to shadow, instead of having an abrupt jump This is much more easily achieved with diffused lamps than with open ones And keep your lighting *natural* Don't go for any freakish effects—under the guise of "art" Art conceals art, and by keeping the lighting from calling attention to itself you will have the most natural looking picture The beauty and appeal it will have should be subconscious in everyday photography Making a woman *look* appealing, and making the audience feel her appeal from the screen instead of giving the audience the feeling that they are looking at a beautiful photograph of a woman is what constitutes good lighting and good photography

Rubber Shortage Hits Movie Cobweb Making

War according to the set dressers at Universal is just what Sherman said it was The rubber shortage got to them today when they started adorning a warehouse set with cobwebs for "Sherlock Holmes Saves London"

Cobwebs in Hollywood are made of liquid rubber spun out in a sticky stream by a fan The experts were counting on quite a lot of cobwebs for the big set, but all they got was one tiny can of liquid rubber The word was that when this supply was transformed into cobwebs, why that was all the cobwebs there were going to be

Ford films midway

The following is from the Hollywood Reporter June 18 1942

Commander John Ford U S Navy is in Washington today assembling and editing the greatest action picture ever shot a picture that will be remembered for centuries after his Academy winner, 'The Informer" has been forgotten

The Ford masterpiece is the Battle of Midway He filmed it without advance preparation with the aid of a one man crew —young John Patrick McKenzie photographer second class of the Navy and 20 year-old son of the veteran cameraman Jack McKenzie

Ford supervised the picture and shot some of it himself And during part of the filming one arm was almost useless as the result of a Jap machine gun bullet sprayed down from one of the raiding planes

The story of the Battle of Midway is more dramatic than any script Ford ever read He was sent from Hawaii to Midway two weeks before the Japanese raid which resulted in the greatest American victory of the war He and his one man crew made the 1100 mile trip by mosquito boat

When the Jap airfleet attacked, Ford and young McKenzie were perched on a tower They turned their cameras on the bombing machine gunning Nipponese who were attacking with everything they had all of the vital installations on the tiny Pacific island

During the height of the Jap bombardment which was aimed at destroying all of the utilities fortifications and airport facilities Ford turned to his youthful assistant and asked

What building is this?

The Power House said young McKenzie

And so it was Commander Ford had shot the story of the Battle of Midway perched on top of one of the main targets of the raiders

The former top director of 20th arrived from Midway Tuesday and left by plane for Washington last night evidently under urgent orders to report and start preparation of his picture which it is understood will be released as a Navy short Ford would not discuss his part in the battle while here But from other sources the details were learned of the heroism of himself and his boy aide—heroism which may bring him an Oscar from Uncle Sam

As he boarded an airship for the east, Ford carried one arm bandaged Although painful, no serious effects are anticipated from the wound

In the camera unit of Commander Ford are several other Hollywood lensers Among them are Greg Toland Paul Mohn and Fred Anderson A dozen members of IATSE local 659 of International Photographers are stationed at Hawaii Several of these, it is understood, filmed the battle of the Coral Sea Some may have been at Midway but none was mentioned in the reports told the Reporter

When International Photographer contacted the family of John McKenzie to find out if they had heard further from him his mother quoted a letter, a short one, and the only news received to date It read, 'Sorry not to have written in the last two weeks mother but have been away on a little trip"

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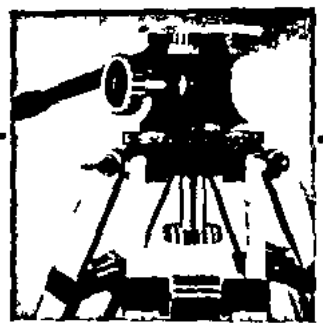
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TRADEWINDS

Agfa Announces Two New Defense Films

In view of the fact that defense industries are finding an increasingly wide number of uses for industrial x ray films Agfa Ansco has designed two new films—*Superay* "A" and *Superay* "B"—that have unique radiographic characteristics

Because of their extreme contrast and fine grain it is possible with these new films to record minute defects that have escaped detection by films generally used for x ray inspection in the past The manufacturer states that *Superay* "A" is equal or superior to any other available film—except *Superay* "B"—for recording traces of foreign material or cracks in castings and welded joints Requiring slightly longer exposure than "A" *Superay* "B" now enables industry to record and study detail within a structure of metal or other material in a manner that would remain impossible were it not for the unique characteristics of this newest material for non destructive radiographic testing Particularly interesting is the adaptability of both *Superay* "A" and *Superay* "B" to give optimum results when used with million volt and radium exposures as well as low voltage exposures for raying aluminum and magnesium alloys

Requests for further information on these new films should be sent directly to the Product Information Department Agfa Ansco Binghamton, N Y

Wabash Has New Bulletin on Kodacolor

Bulletin No 301 on "Flashing Kodacolor" lists data and exposure tables on the flashing of Kodacolor with one bulb mounted at the camera or two bulbs flashed in tandem lighting The daylight blue flash only is recommended as this has the higher 6000 degree Kelvin temperature coming nearest to the ideal lighting conditions of bright summer sunshine Write for your free copy to Wabash Photolamp Corporation Brooklyn N Y

De Vry Pays Cash Awards

W C DeVry president of the DeVry Corporation, Chicago has instigated a production for Victory Drive with an offer of substantial cash awards for suggestions by employees on how to better the manufacture and production of motion picture sound equipment for the nations armed forces to which this firm is now largely giving its entire facilities

Mr DeVry in announcing the CASH AWARD SUGGESTION PLAN said that the campaign was being conducted in accordance with Donald M Nelsons request that management representatives give employees every opportunity to suggest ways to increase efficiency of war production

Stepped up production has necessitated the acquisition of additional factory space for more efficient and speedier handling of urgent war orders

New Stereo Camera and Viewer

Stereo Inc Pives Strong Bldg Los Angeles, announces the Kirk Third Dimension Camera and Viewer which takes pictures with standard Kodachrome film

The camera is finished in a modern design plastonyx case lightweight and easy to carry It has dual synchro shutters built in view finder and a fixed focus It is easy to operate—there are no shutter speeds or light meters to worry about The subject is merely framed in the built in view finder and the picture snapped

The result when seen through the Viewer, a perfect complement to the camera in the same plastonyx finish is a picture with all the warmness, depth and color of the live object

The manufacturer claims that indoors or outdoors the professional quality third dimensional pictures are easy to take with the Kirk Stereo Camera during the day or night Every detail of the subject is captured in all its vivid reality and the Stereo Viewer recreates the same thrill of pleasure you experience through your own eyes

Stereo through its simplification of design has made it possible for those who formerly believed that expensive equipment was necessary for good pictures to compete with professionals and enjoy the thrill of their own 'shots

Because of the clarity of detail depth and perspective obtained in the pictures the Kirk Stereo Camera and Viewer is finding its place with many picture lovers

Stereo combines beauty and utility at a nominal cost

Dumont Announces Giant Oscillograph for Lectures

For lecture demonstration purposes particularly but for any other use where oscillograms of very large size are desirable a new giant screen cathode-ray oscillograph has just been developed by the Allen B DuMont Laboratories Inc of Passaic N J Known as Type 233 and scheduled for release by fall this oscillograph utilizes the DuMont Type 2532A20 intensifier teletron which has a medium persistence green screen and is 20 inches in diameter The final accelerating potential applied to the teletron is 6000 volts which means high intensity fluorescent trace for observation even in well lighted places

Identical amplifiers are provided for deflection along the X and Y axes permitting the investigation of phase relationships. Provision is also made for connection of signals directly to the deflection plates of the teletron

An internal linear time base generator is provided by means of which either recurrent or single sweeps in the range of from 8 to 30 000 c p s can be produced The time base circuit can be synchronized to external signals to signals of the power line, and to either positive or negative phase of the signal being amplified through the Y axis.



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They Say···

By RELLA

● Fred Parrish at Paramount on special assignment For Whom the Bell Tolls Fred has two hobbies boats and designing photographic equipment

● Robert Johannes of Republic now in the U S Naval Forces

● Sam Moran of Columbia now in the U S Navy

● Malcolm Bullock whose still photography recently has received exceptional praise has left to join the U S Army Signal Corps

● John Hickson's cheerful smile and inquiring gleam will not be seen around Hollywood now as friend John is now CPO in the Naval Forces

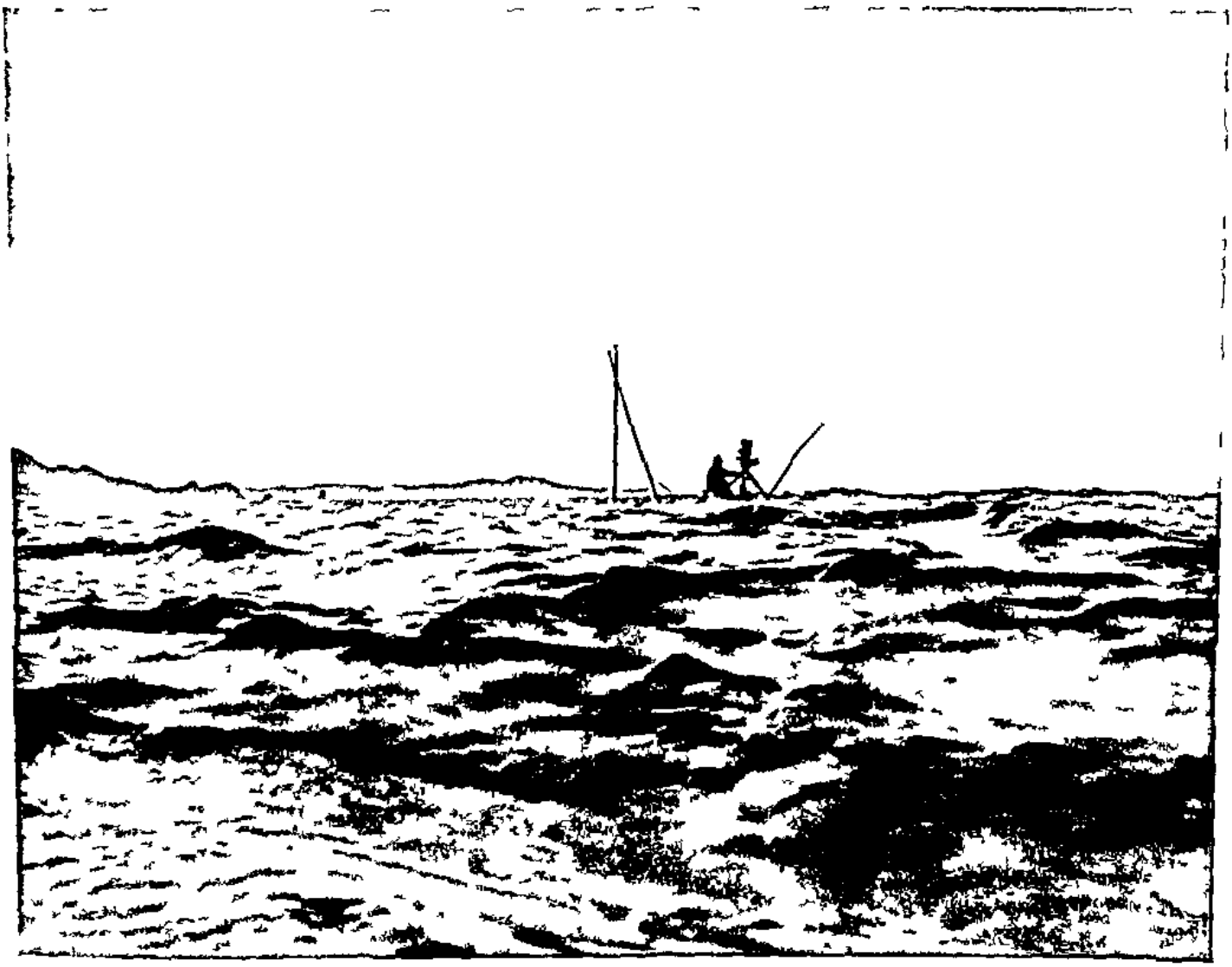
● At Fort Monmouth Long Island Lieutenants William Heckler Ben Wetzler Herman Schopp Lloyd Knechtel and William Cooper Smith Captain Art Lloyd Private Eddie Wade We asked Captain Charles Downs former business representative of Local 611 whether it was easier to run a union or the Army Downs replied Make your own choice Here you don't have time to worry about scales jurisdiction or employment" Incidentally Downs son has joined him

● At Fort Monmouth let's not overlook Bill Crosson of Local 666 and Lieutenant Rey Scott who photographed Kuzan the story of China

● Life is strange when you discover that Carl Laemmle Jr is learning the rudiments of photography with Harry Hopkins son under the tutelage of Local 659 in military action

● Mention should be made of Buddy Myer and Tom Smith of Local 695 at Fort Monmouth

● Allen Davey who came from the sidewalks of Bayonne and went on to win the Academy Award is in Kanab Utah for Columbia Pictures with George Meehan who came from the sidewalks of New York With them are second cameramen Lee Davis Fayte Browne assistants Jimmy



ODD SET-UPS IN STRANGE WATERS

This is Shackelford and his old bi pack camera lashed atop a good sized fishing boat where he spent twelve hours on this particular day, while working on Warner Bros short, "Swordfishing" In a future issue you'll see some of the fish he caught The fact that the chap who shot this picture was only fifty feet away in another boat will give you an idea of the size of the enormous swells. Taken off the coast of northwest New Zealand

Gos Raider Olson and Earl Metz still photographer Jim Fullerton technicians Thad Brooks and Roger Mace

● George Meehan s son is in the Photographic Unit of the Naval Forces



By Frank Bjerring

camp and I quite sure that Roy will receive his promotion Lester tells us that Army life is hard and rough and develops a man for every condition He says it would be nice if the boys would write

● Fred Anderson sends greetings and asks to be remembered

● Seen in Washington Lieutenants Seigler Halprin and Davis and Ensign Mark Armistedt C.P.O Bod Rhea Nelson McEdward Tom Evans Sam Moran Joe Lykins Bill Wheeler and Thor Loovos Ed Garvin and Bud Moreno also Chuck" Cooper of Local 695

● Major William Wyler who gave us Mrs Miniver" now actively engaged in work of a very serious nature in the Army Air Force

● Major Frank Capra now stationed in Washington using his talent for the protection instead of the entertainment of civilization

● Remember Reggie Lyons? Now traveling around in the capacity of Civil Service Photographer

● In Washington to everyone s surprise Jack Stevens now a Navy photographer

● Also in and around Washington our genial host friend and guide J C. Brown the one member of the I A who coaches the President when the newsreel barrage commences

● Now at RKO first cameramen Gus Peterson and Mack Stengler

● John Alton says Ice Capades will be his last at Republic Studio before departing for service in the United States Army

● Fred Detmers training for induction as a commissioned officer in the United States Army

● In from Brazil, Sid Zipser and Ed Pyle

● Gene Pol to now a bachelor of civil engineering from U.S.C.

● On the coast for a brief stay Lieutenants Al Gilks and Art Arling

● Cliff Stone now a First Lieutenant at Wright Field Dayton Ohio

● Alvin Wyckoff having been given a first camera berth at MGM all wish him well and much success

In the Mail

International Photographer
Hollywood Calif
Gentlemen —

Where can I get a copy of "I Witness" by Norman Alley?

H H Brooks
Oconowoc Wisc

REPLY Most of the book stores in the larger cities carry "I Witness," or you may secure it direct from Wilfred Funk Inc., 386 Fourth Ave., New York City The price is $2.75 plus sales tax

Lensman Goes Western

Cameraman Milton Krasner who specializes in the parlor, bedroom and bath flicker is now the outdoor boy of Universal Studios Having lined up the camera for "The Lady From Cheyenne" "The Vigilantes" and "The Spoilers," he is now peeking through the machine on "Deep in the Heart of Texas the Universal opus starring Robert Stack Brod Crawford and Jackie Cooper with Anne Gwynne Ralph Bellamy Jane Darwell and Leo Carrillo sharing featured honors

Studio Shop Builds Yacht

With ship yards going full blast for national defense Universal studio technicians made use of materials on hand and built a 42 foot yacht within their own shops for a sequence in Abbott and Costello s Pardon My Sarong"

The boat has been pronounced by sailing experts as perfect in every detail It has been christened "Serenade by Virginia Bruce who has the feminine lead in the picture

The yacht, known to naval architects and sailors as a ketch carries nearly 2,000 square feet of sail and has a mast 75 feet tall, a beam of 14 feet and displaces approximately eight tons

The vessel was built for a sequence in which Abbott and Costello along with Miss Bruce Robert Paige and a trained seal known as Sharkey set sail in a race to Honolulu only to be driven off course in a tropical storm The boat is beached on an uncharted island where the party experiences adventures such as could only happen in an Abbott and Costello picture

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Vol. XIV August, 1942 No. 7

ON THE COVER

Art Arling, Lt Sr Grade, Member Local 659

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Editor, HERBERT ALLEN

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Contributing Editors D K ALLISON, GEORGE HURRELL, CHARLES SAXTON, ROMAN FREULICH, ERNEST BACHRACH, ALVIN WYCKOFF, WILLIAM V DRAPER, FRED GATELY, GEORGE SCHEIBE.

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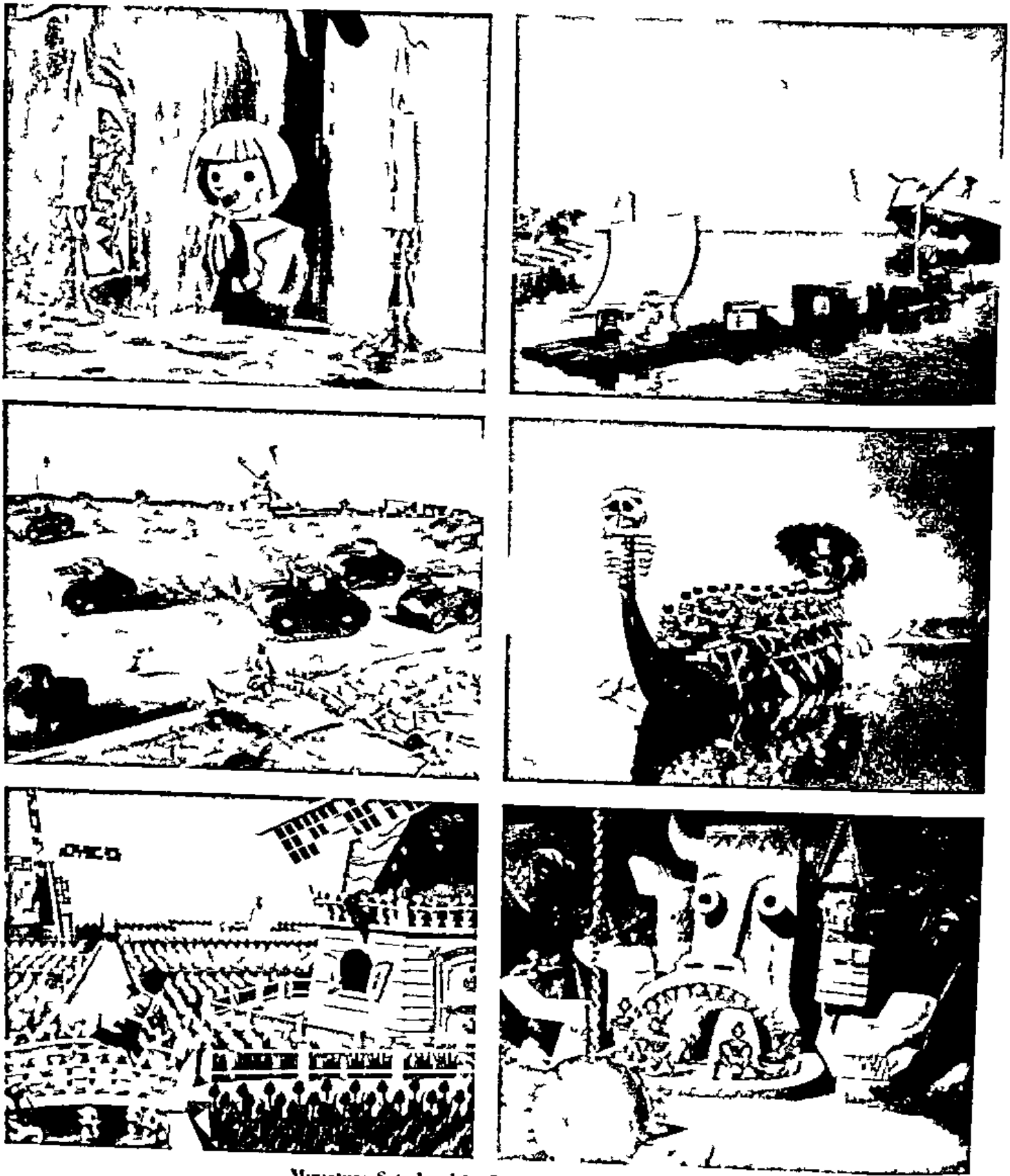
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Right, top to bottom: J m Dan ly land on a na e le is cap u ed by cann bals and held fo trial n Hoola Boola."

hue brightness (value) or saturation (purity) are readily noticeable

Except when dealing with pure fantasy the studio maintains a policy of keeping all designs authentic and adhering strictly to scientific fact In "Hoola Boola" the author noted that the order of the colors of the rainbow painted on a sheet of glass for a glass shot was incorrect Artists frequently make this mistake Their aesthetic sense impels them to paint the blue of the rainbow on the outside because a deep toned cool color serves to hold the other colors in better to quote one artist Perhaps one might say that a cool dark color makes a better outside border than a warm bright one Nevertheless Nature's idea is different Since the shorter weaker violet and blue rays of the spectrum are bent more sharply by the prismatic action of the moisture in the atmosphere than the longer stronger red rays, *violet* and *blue* form the innermost part of a primary rainbow** while the outside of it is red

Other problems of the paint department involve paints which will not peel or blister under hot light and paints that won't crack when applied to flexible surfaces

A notable feature of all of George Pal's Puppetoons is the richness and beauty of their color One reason for this is due to an advantage inherent in the process itself Cartoons (which are flat drawings) must depend upon shading in order to achieve perspective or the illusion of depth but in Puppetoons the shadows are true shadows cast by the objects themselves Therefore a greater variety of tones is possible Also colored lights are used in conjunction with the use of colored objects thus further enhancing the beauty and interest of each scene However there is another and perhaps more important reason for the unusual color values seen in these pictures and that is George Pal himself for unquestionably he is one of the truly great colorists of today Just as a great composer can take the thirteen notes of the musical scale and transform them into more beautiful combinations than the average composer so can a truly great colorist take the colors of the spectrum and transform them into more beautiful combinations than the average artist

But the pictorial side is only one half of the completed picture First must come *the story George Pal works feverishly* with the story department especially when the deadline for the finished script approaches After that comes the musical score In most cartoons the music is incidental but in Puppetoons it is *fundamental*

Then music dialogue and sound effects are recorded This is done in advance That is the sound comes first and the action afterward Is Thus perfect synchronization is attained

George Pal is the only one in the world making puppet pictures in Technicolor for regular theatrical release These pictures have already passed the novelty stage Like the "talkies" color—and motion pictures themselves—Puppetoons have proven that they are here to stay Audience response shows that they have a definite place in the theatre program—and more important still In the hearts of the theatre-going public

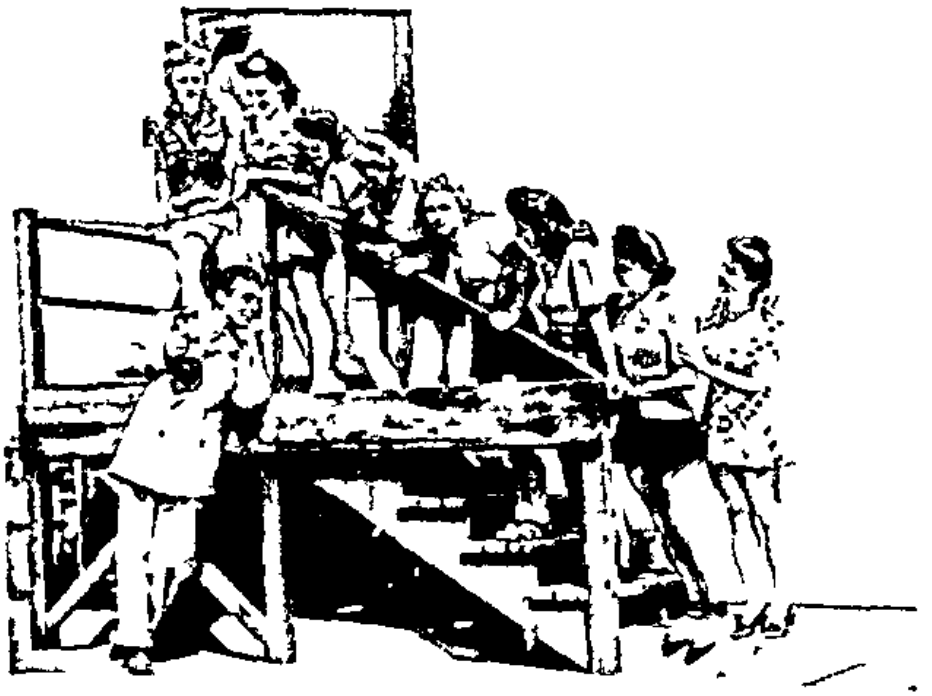
**Sometimes two rainbows appear in the sky, one being a reflection of the other The mirrored rainbow is called the "secondary rainbow" and the order of the colors is the reverse of the primary rainbow

Offstage Shots During Filming of "Footlight Serenade"

By Milton Gold



Cobina Wright and Lee Garmes, first cameraman



"No privacy" says Victor Mature as he tries to make a telephone call with eight beauties listening in.

JOHN THOMAS JENKINS STANDARD FOR SAVING FILM

By John Thomas Jenkins

The matter of saving film these days is one that looms large in the minds of those who must use it and especially to those of us who make our livelihood through its use Following is described a method that is obvious rather than revolutionary and will save fifty per cent using the same film camera, lab equipment and projector

First we reduce the pull-down to three perforations which necessitates reducing the aperture only 1¼mm Any camera mechanic can do this The projectors are equipped with 12-tooth sprockets instead of 16, the aperture plates changed and film rollers adjusted to the smaller sprockets

Now because the pull-down is reduced the force on the film is reduced force being mass times acceleration In the old standard we had four sprocket holes pull down which we will call four units of acceleration The film is approximate six thousandths of an inch thick which we will term six units of mass So we reduce the acceleration by pulling down three perforation and reduce the mass until the thickness of the film is carrying the same proportionate load The film now can be three and three-quarters thousandths thick but let us say four thousandths

To sum up what we have done We have saved twenty five per cent by reducing the pull-down and an additional thirty three and a third per cent in thickness by taking advantage of the reduced strain on the film—a fifty per cent or more saving in all

In practice what I did was to change the cam in the camera put in a 24 tooth main sprocket and reduce the height of the aperture plate 1¼ mm In the projector I changed to 12 tooth sprockets and reduced the height of the aperture plate

I photographed some film marked it "Develop and print and sent it to the lab The next day the lab delivered the print without any difficulties—and it projected perfectly



Gene Autrey and John Thomas Jenkins



War Chases Movie Troupe

War maneuvers have chased a movie troupe more than 4 000 miles

And the troupe still is trying to find somewhere in the seven seas where it can film pictures without becoming over friendly with submarines.

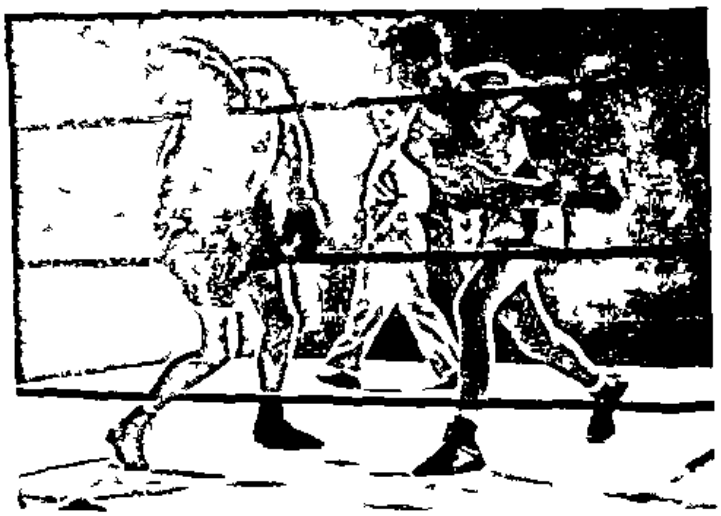
Robert Webb assistant director to Henry King cabled 20th Century Fox today from Acapulco Mexico that he and a score of others were sailing for Costa Rica to try to get background footage for "The Black Swan" Darryl F Zanuck's production in Technicolor of the Rafael Sabatini story

The troupe has been filming for two weeks at Acapulco with the cooperation of the Mexican government, but naval maneuvers in that vicinity have stopped them They also attempted to film at Merida Yucatan

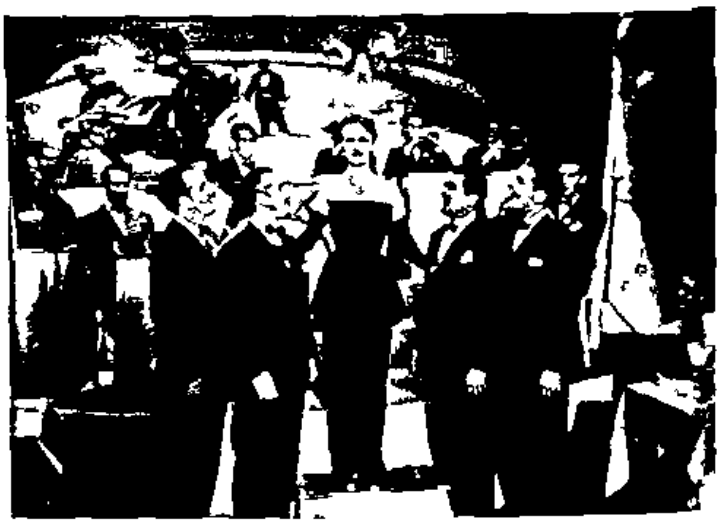
Before that Webb and Director King scouted Cuba Porto Rico and several islands in the Carribbean but the threatened operations of Nazi submarines balked them there Washington previously had refused to permit any movie operations off the California coast

When and if Webb and the troupe find a good spot Tyrone Power and Director King will fly there to duplicate one of Sir Henry Morgan's famous buccaneer battles

"Footlight Serenade," 20th Century Fox Production



1 When Tommy Lundy (Victor Mature), the world's champ knocks out Kid Corcoran (Jack Pepper) in just two minutes, a smart New York stage musical producer figures that the champ would click as big box office on the stage. The champ agrees to become a hoofer and musical comedy star because of the heavy coin involved



2. However the producer finds he got more than he bargained for as Tommy insists upon handing the show's feminine lead to his girl friend, Estelle Evans (Cobina Wright, Jr.) who currently is getting by as a socialite night club warbler



3 Meanwhile Pat Lambert (Betty Grable) and her side kick, Flo De Vere (Jane Wyman) persuade the dance director (Hermes Pan) who actually directed the seven numbers in "Footlight Serenade" that they should be in the line-up of chorines.



4 When Bill Smith (John Payne), Pat's betrothed, shows up at the stage door to pick up his girl, he is mistakenly included in a group of pugs about to try out for the role of Tommy's sparring partner in a boxing event in the musical



5. Bill badly needs a job and accepts the role. In their first tryout he discovers that though the job may be profitable, it has its physical hazards. Slap (Phil Silvers)—left with glasses the show's press agent is not sure that all will turn out well



6 So Tommy Lundy the champ takes lessons in hoofing from Pat thereby becoming also smitten in the cardiac region



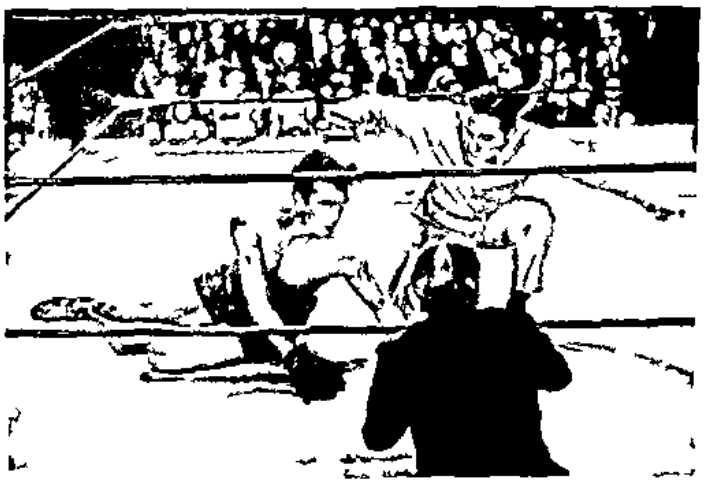
7 Now that B ll has a job he and Pat are married followed by a one n ght honeymoon in a swank hotel where unfortunately the pa r are d scovered by the mal c ous E telle



8 Because Tommy has eased Estelle out of the lead and put Pat in her role the producer and press agent beg Pat and B ll not to reveal their wedd ng Deception s somet mes d fficult s nce B ll is palmed off on Tommy as actually being Flo s lad



9 At the dress rehearsal while the big g rl number is under way Estelle t ps off Tommy that Pat has been two tim ng h m nder the phoney name of Mrs Sm th



10 The bout on open ng n ght between Tommy and B ll becomes someth ng for keeps B ll takes a shellacking Everyth ng turns out happily when Tommy learns that B ll and Pat are legally married. The accommodat ng champ now starts mak ng a play for unattached Flo

Bonds Bought for "Yankee Doodle" Premiere Will Build Three Ships

With $5 000 000 a sum equal to the cost of construction of three Liberty ships by the California Shipbuilding Corp as their goal and hopeful of doubling that quota, Treasury officials have announced sponsorship of a Hollywood motion pic ture pren iere on August 12 that will make financial and entertainment history

On that evening Warner Bros will turn over its Hollywood Theater to the Treasury for the Western Build Ships premiere of Yankee Doodle Dandy a film based on the life of a man who received from President Franklin D Roosevelt a Con gressional medal for his contribution to the American spirit

New York poured $5 750 000 into the nation s war chest at the world premiere of this same picture but plans formulated by Local Treasury Minute Men assure that this record will be exceeded by a sub stantial amount poss bly even doubled

Money raised through the sale of bonds for tickets to this highest priced entertain ment in history will represent the cost of at least three Liberty cargo ships in the 164-ship program now under way at the vast Wilmington yards of the California Shipbuilding Corp according to Howard Mills adm n trator for the Southern Cali fornia branch of the Treasury s War Sav ings staff who made the announcement

The keel of the first of these three ships will be laid during the first week of the sales drive Construction will proceed day by day with bond purchases rivets being driven as the dollars pour in Launchings will follow completion of the Build Ships bond selling campaign

The name of every person who buys a ticket for the Yankee Doodle Dandy Western premiere will be inscribed on a scroll to be placed in the captain s cabin of the ship his purchase helps to build

Mills explains that these millions will be raised by the sale of War Bonds with prices of individual seats in the huge Warner Bros theater scaled from one $25 bond to one $25 000 bond

Yankee Doodle Dandy life story of George M Cohan starring James Cagney in the Cohan role and didected by Michael Curtiz had its world premiere in New York nine weeks ago under similar Treas ury Department auspices at which time $5 750 000 was raised Thus it is hoped that after the Hollywood premiere, the Warner Bros picture will have brought something like $15 000 000 into the gov ernment war chest.

pity THE POOR MECHANIC

Douglas Aircraft Company, Inc.

COWL FLAP AND OPERATING MECHANISM

SEC NO	PART NUMBER	PART NAME	QUANTITY
	4 9483	FLAP ASSEMBLY ANTI DRAG PING COMPLETE (FOR SPECIAL FLAPS SEE PAGE 4)	24
60	AN4 5	BOLT	24
	A 3 0-4	NUT	24
	AN960-416L	WASHER	24
602	5608	ELBOW AN DRAG PING COWLING FLAP	24
6	0673477	HINGE COWLING FLAP	24
604	0 9	BUSHING ANTI DRAG PING COWLING FLAP STEEL	48
605	5 7 58	FLAP ASSEMBLY AN DRAG PING	24
606	608	LEVER ASSEMBLY ANTI DRAG PING COWL FLAP	24
607	1 35275	BUSHING COWL FLAP LEVER	48
	9	SPRING FITTING	24
608	AN 0-8	SCREW	9
609	207 49	LEVER COWL FLAP OPERATING (FOR SPECIFICATIONS SEE PAGE 6)	9
610	3 736 3507	BUSHING	56
611	AN 4	BOLT	8
	7049102	NUT	28
612	0[illegible] 00-00-006	BUSHING	28
613	0737 4	SHAFT COWLING FLAP JACK	32
614	20 350 0 5 7-006	BUSHING	32
615	[illegible]	LEVER FORWARD COWLING FLAP OPERATING	32
616	3 736 3505	BUSHING	64
617	AN [illegible]	BOLT	32
	AN 0-3	NUT	2
618	207 467	HOUSING COWL FLAP JACK SHAFT	32
619	AN[illegible]	BALL BEARINGS	64
620	AN3-20A	BOLT	64
	7049102	NUT	64
62	45 A- 004	ROD ASSEMBLY H & R H THREADED CONTROL	29
	45 004	ROD	8
	RE3FL4	BEARING END H THREAD	28
	RE3F4	BEARING END R H THREAD	28
	AN 6-4R	NUT (R H THREAD)	28
	AN3 6-4L	NUT (L H THREAD)	28
622	2 277	ROD ASSEMBLY COWLING FLAP CONTROL TOP	4
	277	ROD	4
	RE3FH-2	END BEARING FAEN R	8
	AN3 6-5R	NUT	8
623	AN3-	BOLT	40
624	AN3-22	BOLT	32
	AN3 0-3	NUT	64
625	AN3- 5	BOLT	48
	AN 0 3	NUT	48
626	07[illegible]08	ROD ASSEMBLY FLAP INTERCONNECTING OPERATING	24
	07[illegible]06	EYE ROD END ADJUSTING	24
	073[illegible]-2	FORK ROD END ADJUSTING	24
	07 709	ROD COWLING FLAP INTERCONNECTING	24
	AN3 6-4R	NUT (R H THREAD)	24
	AN3 6 4L	NUT (L H THREAD)	24
627	07[illegible]0	BUSHING ROD END	4
628	AN3-	BOLT	24
	AN 0 3	NUT	24

SECTION 11 PAGE 11 — DEMOUNTABLE POWER PLANT (AIRCRAFT 6202) — DATE ISSUED SEPTEMBER 94

Left page of catalog

Everybody knows that the great airplane industry of the present day jumped from swaddling clothes to long pants without having time to go through the intermediate stages like a normal industry. It suddenly found itself supplying the whole world with airplanes. Is it any wonder then that the man in a remote repair station, or even in the field, in need of a part for a ground ed plane had the very dickens of a time trying to explain to the factory thousands of miles away just what he wanted? Of course it was. Sometimes as many as fifteen telegrams were exchanged before the factory could understand what was needed.

Then one day Paul Kunz stopped in at the Douglas Aircraft Company. What happened? Well, Mr. Kunz hadn't been in the advertising game for nothing. His slogan had been "An illustration speaks a universal language"—and he set to work to prove it. He realized the hardships of that isolated mechanic and proceeded to give him what he needed.

There is an old story which is credited to our own Civil War. It seems that one day a German officer attached to the Union Forces for observation purposes was standing with a young sergeant on the edge of a wide river across from which was a very high tree. With characteristic German assurance and to prove to the Yankee sergeant that the German Forces were greatly superior to those of the Yanks, he turned to the sergeant and said:

"How vide is dot river, how high is dot tree? Dere is not a man in der German Army dot couldn't tell you dot."

Not a little provoked the Yankee sergeant snapped "Well how wide is that river? How high is that tree?"

The German officer clicked his heels together and pompously replied "Vell if I had my theodolite—"

"Theodolite" snapped the Yankee sergeant, "Hell if I had a boat and a clothes line I could tell you."

That's just what Paul Kunz and his illustration department have done. To the men in the remote places of the earth they have sent a boat and a clothes line.

A bill of material even to a man familiar with airplanes or any other kind of complicated mechanism had been at best a difficult thing to understand but by breaking down that bill of material into a complete series of drawings, with their proper references and by showing every single piece of an airplane assemblies, sub-assemblies and so on down the line from the nose of the plane to the tip of its tail the Douglas system has made it possible for the man in the most remote location who perhaps doesn't even understand a word of English to find what he wants. He can go through the easily understandable list of pictures and will find not only the picture of the piece itself, but of all the pieces that go with it to make up the sub-assembly that enters into the making of the whole plane and by means of direct item numbering the man can refer to the part number opposite the item number and order everything from the *smallest screw to the largest* part by its own factory part number and be sure that he will *receive exactly what he wants*.

Just suppose you got an order for that little odd shaped piece of metal with two holes in it that goes immediately below a square piece that has four holes in it. It would take some guessing to try and fill the order. But if the man had that piece in his hand and looked at that which

speaks a universal language a picture of that particular piece and all the pieces that go with it in their exact relation to each other he would be pretty sure to get the exact part he wanted

Another thing has been done to make the selection even easier In the catalog or parts list the pictures are always on the right side and the corresponding number and description on the left page Not much chance for a mistake

It took a lot of work a lot of patience a background of experience and an infinite amount of detail to work this out The artists that work in this new illustrations group are not all mechanical draftsmen

(Continued on Page 24)

Col Zanuck Announces Expansion in Training Film Production

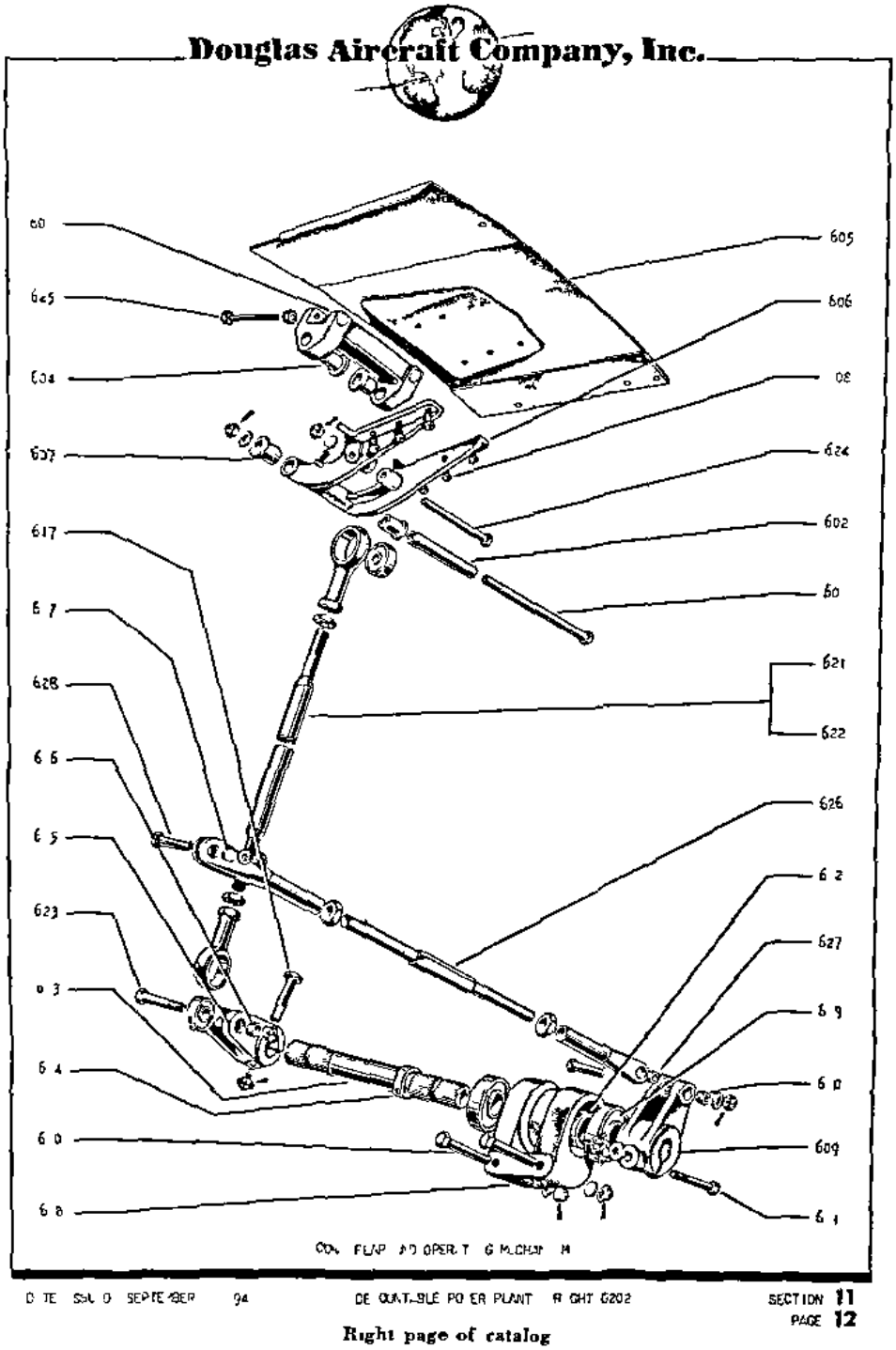
Colonel Darryl F Zanuck Chairman of the Research Council of the Academy of Motion Picture Arts and Sciences announces an expansion in the Research Council Training Film production program and the immediate start of production of a number of documentary and orientation films to be made for the education and training of the Army

These films will be made under the supervision of Major Frank Capra S C, who will be stationed in Hollywood representing the Special Services Branch of the United States Army

Colonel Zanuck also announced that the Research Council will lease a portion of the Fox Western Avenue Studio consisting of offices projection rooms film vaults and cutting rooms to be utilized in the assembly of these films

Under arrangements now being negotiated between the Research Council and the studio attorney 20th Century Fox will lease this studio space to the Research Council for the duration of the War for $1 00 per year

Production of these films will be handled in the various studios under the existing arrangements between the studios the Research Council and the War Department by exactly the same procedure under which over 200 reels of training films have been produced in Hollywood during the past 15 months



Right page of catalog

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food photography

By Maurice Terrell,
Staff Photographer, LOOK Magazine

There are n ore exciting assignments than a layout on fo d and yet because food is rather hard to photograph the job can be fun if the photographer accepts the chal lenge and does his level best to turn in a bang up set of p ctures

The problems are many but most im portant for magazine work is to arrive at a black and white print which will even in reproduction convey to the casual reader some of the appetizing appeal that the original food had with its color and aro ma This is ch iefly a problem of l ghting —of the rendering of texture and form and is not too d fficult if you have plenty of equipment and time at your disposal

But seldom does the professional pho tographer get to work under ideal condi tions Usually he has to make the best of a not too good situation Such was the case of a layout for the August 11th issue of LOOK Magazine

In add tion to the usual problems this layout presented difficulties all its own In the first place there were a lot of pic tures to be made in a little time Luckily Polly Patterson food expert and star of Pete Smith s Technicolor short, Victory Vittles was handling the food end of it and she has had much movie and other picture experience But unluckily she and her assistant were rushing out dishes with the speed of a short order counter at noon and each step had to be pictured as well as each finished product, and food must be photographed immed atelv after prep aration and no foolin'

Then too LOOK demands a certain quality of "alive ness" from even still lifes Each picture should tell something of a story particularly "how to do" shots such as these were And the story as a whole had to be strong enough to compete for space in the magazine against such sure fire material as war and movie stars and kings of sport and what not

Because still lights (with no assistant to handle them) would have been too sl w to work with on this occasion the use of flash was indicated But for the same rea sons as well as because of the present shortage of flash bulbs, only one globe per picture was used and retakes were held to a minimum

Now to render texture and get form and separation of tones all *musts* in food pho tography ordinarily call for careful side and back lighting But with the use of only one light source there is a definite limit as to how far back or around the light can be used This is especially true when as in th s instance "peanut globes are being used which give a minimum of spill or fill in illumination

So to start the work off a good sized table was set up One side was free for Miss Patterson to work on and the other side open to the photographer so that they could both perform their duties quickly without at all interfering with each other A third side was butted against a white

Polly Patterson Hollywood food expert, star in Pete Smith s Techn color short "Victory Vittles" demon strating food preparat on for a LOOK magazine lay out (issue of Aug 11 on sale July 28) This shot was made w th an open flash using one bulb, with the camera on a tripod Holding the flash off the camera a little to one side gave more roundness and separation and a much live ler play of lights and darks The "open flash" method insured more cer tain results el minating the possibilty of spoiled shots due to camera movement or miss in synchroni zat on and the need to double up on a shot for pro tection purposes.





This was a speed fla h shot (but again with just one globe as were all the rest of these) which stopped the movement a l ttle but not enough to "freeze" it wh ch would have destroyed the illusion of motion

"Open flash" with camera on tripod the one bulb being held above and back of the subject, but not so far back that the shadows would go too dark A light wall on the left helped throw light back into the shadows. While you cannot accurately judge exactly where shadows will fall, you can by watching carefully, see the effect at the moment of



exposure and decide whether or not it should be re-shot, and if so, what changes should be made Practicing with a single spotlight is perhaps the best way of learning what to expect from a single "peanut" bulb flash



Here the movement was intentional (it was shot "open" again, with no attempt made to stop motion) because the action rather than the texture was important in this step of the story for LOOK

wall to serve as a reflector to kick light back into the shadow areas

Because texture was important a larger camera which renders this better than the easier-to-use miniature was employed On the close up shots where there was only slow action the "open flash method of exposure was used (The S-M bulbs would have been ideal for this) The camera was set on a tripod shutter closed slide drawn lens covered with slide shutter opened bulb flashed lens again covered with slide shutter closed slide replaced all in much less time than it takes to tell it And it's a very sure fire process with a minimum of chance of mishap from either camera movement for example (which destroys texture) or from a miss in synchronization which is rare now but does sometimes happen It's a certain enough process that duplicate "protection" shots are not necessary

Extreme care was used in the position of the bulb however The side from which the light should fall was first decided upon and then the globe held as far to that side and back as it could be without throwing too dense a shadow in front (relieved by the reflection from the wall as already stated) and without hitting the lens of the camera By watching the subject closely at the moment of exposure you can see pretty well just what your light has done and can judge whether or not it would be better to retake the shot with a different lighting

As for the exposure with the adjustable reflector in full flood position the stop was the same as for a flatly lighted speed flash at the same distance because even though you do get the full benefit of the globe, allowance must be made for cutting into the shadow areas which result from the backlighting

On shots where it was necessary to stop definite action the camera was hand held and synchronized flash used but even then the bulb was used off the camera at arm's length in a position carefully decided upon before exposure

Thus after a beginning had been made the assignment resolved itself into a workable mass production with a minimum of time and material consumed but with that one most important factor in food photography lighting kept flexible enough that justice could be done to each individual set up

The final layout had that appearance of spontaneity that LOOK demands of all its work while at the same time it told its story clearly and appetizingly And the photographer retired from what might have been just another dull routine assignment with that sort of self satisfied feeling we all get when we have thrown our best punches at a rather tough job The only thing which could have increased his satisfaction would have been to have eaten rather than photographed that sumptuous food!

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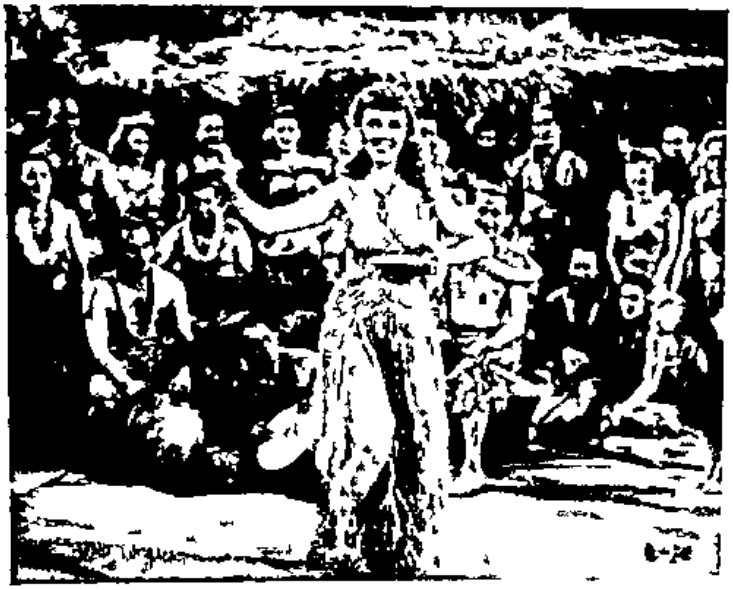
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"Lure of the Islands," Monogram Production



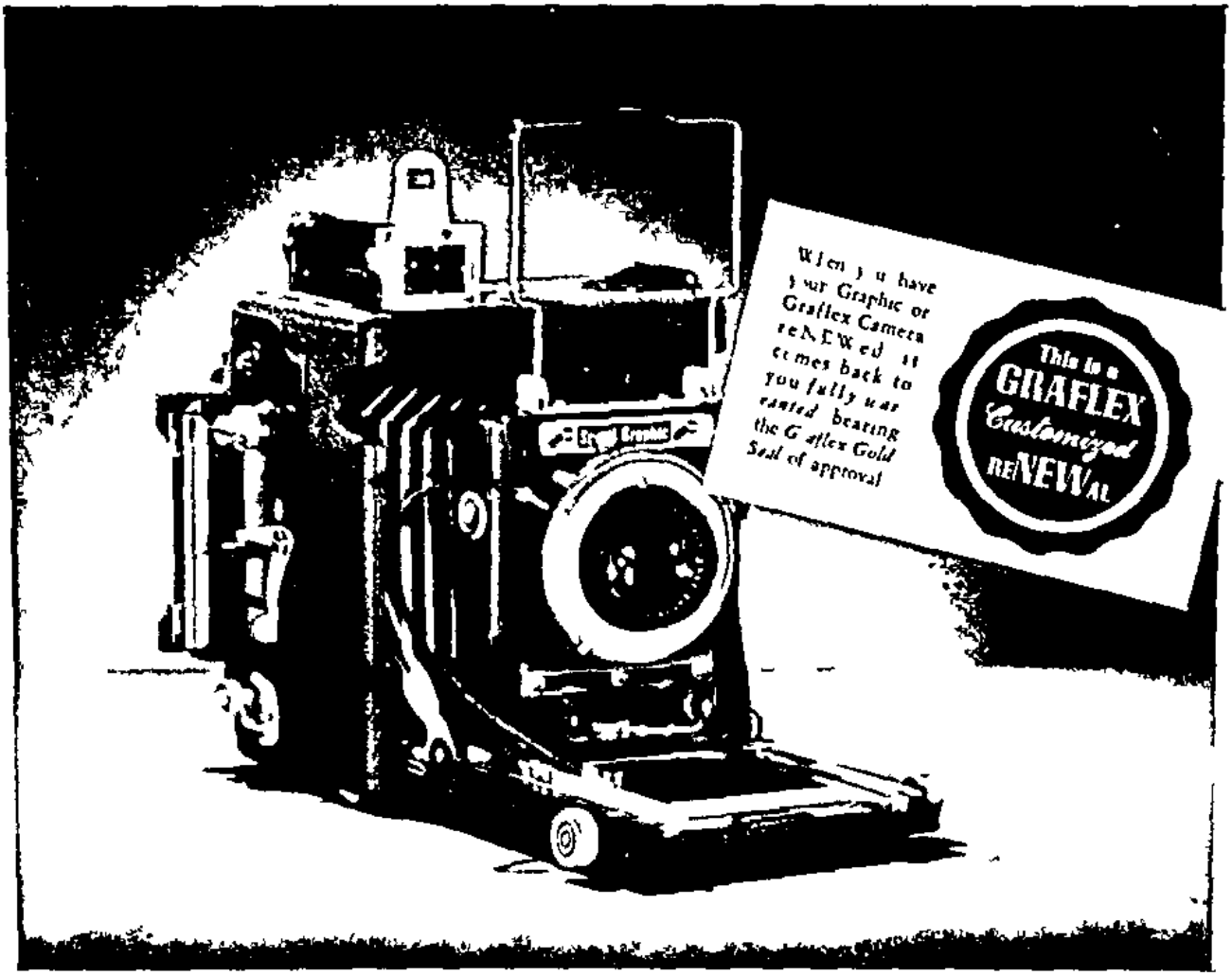






Stills by Warner (Bill) Crosby

MARGIE HART nicknamed "the poor man's Garbo" by Walter Winchell, and recognized as the queen of American burlesque, makes her screen debut in "Lure of the Islands." She plays the part of Tana, a half Tahitian, half Irish girl. Upper left shows Margie's interpretation of the hula. Upper right is Gale Storm who has the part of Maui in the picture and is shown again with Margie in lower left. The two small pictures at right are of Margie as she assists two F B I men in running down saboteurs on the island of Tanukai



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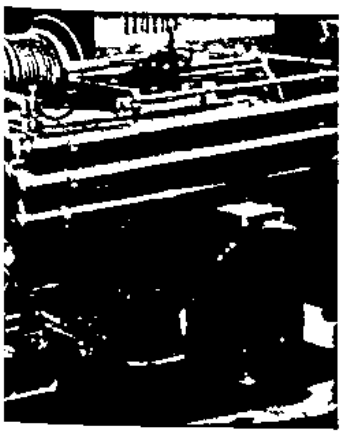
* Tad Lage (Henry Fonda) in Maine rents boats, but customers disturb him. He'd rather sit and fish, but would like to win the $500 to buy a fire engine for the town.



3. He does win and is brought to New York amid much publicity.







6. Tad loses a lot of his country air and falls in love with Claire Dawson uses Tad's love for Claire as a means of holding on to him.

8. The successful school breaks up and Claire tells Dawson off but Dawson makes an even bigger fortune by adopting Tad's technique and running the now successful school for relaxation. Claire and Tad buy the fire engine and drive back to Tad's home town where they will settle down to a life of relaxation.

7. At a birthday party which Claire stages for Dawson the inscription on the birthday cake would reveal the true state of affairs between Claire and Dawson. To prevent Tad seeing it Dawson tips Hunter so that the cake will be defaced.

With Hyman Fink

Staff Photographer
Photoplay Movie Mirror
and *Radio Mirror*



Col and Mrs. Darryl Zanuck and Mrs L. B Mayer at the Heroes Ball, Ambassador Hotel, at which Mrs. Mayer was hostess



Standing left to right Carol Landis, Claudette Colbert Lieut George S Welch Seated Bevo Grable Engu Donald F Mason, the man who sighted sub—sank same" and Ruth Hussey at Heroes Ball



Al Jolson Eleanor Powell and Ann Miller at El Capitan Theatre This is the first meeting of Miss Powell and Miss Miller

PERISCOPES AND ENDOSCOPES

By Frank Arthur Pearson

Telescopic Systems in which the Diameter is Small Compared to the Length

In the field of optical design, man has devised two similar types of telescopic system in which a primary consideration of each is that the diameter be small and the length great In the one case, that of the periscope, the resultant product has been employed for the impairment of life, while in the other case, the endoscope has been an instrument for the improvement of life

Inasmuch as the two instruments are very similar, we shall here mention briefly the endoscope before discussing more fully the periscope, which offers a wider variety of interesting problems that were met and solved by the designers

The term 'endoscope' (*endo* = within, and *scope* = to view) in its general meaning applies to any instrument that is inserted into the human body for the purpose of viewing the condition of an organ normally hidden from view The instrument comprises a viewing system, a tiny light source, a means of irrigating, a means of manipulating or cutting the tissue, and sometimes even a small camera for photographing the interior The overall diameter of the endoscope must necessarily be small in order to minimize the pain accompanying its insertion, while the length depends upon the location of the organ under study When the endoscope is designed for use in connection with a specific part of the body it bears a specific name as shown by the following examples

Laryngoscope — larynx.
Bronchoscope — bronchial tubes
Esophagoscope — gullet, connecting pharynx and stomach
Thoracoscope — chest cavity
Cystoscope — bladder
Endoscope — bladder, urethra, or rectum
Laparoscope — abdominal cavity
Coelioscope — abdominal cavity
Sigmoidoscope — lower bowel connecting colon and rectum

The periscope (*peri* = around and *scope*) on the other hand has had its highest development in connection with use in submarines In fact, according to the Encyclopaedia Britannica (9th ed) submarines owe their practicability to the development of two things the storage battery which enables the craft to navigate under water without consumption of oxygen by the motors and the optical tube" which allows the viewing of surface activity while submerged *

Our civilization may have known submarines as early as during the wars of Alexander the Great, however, it is unlikely that there existed any device for viewing above the surface when the craft was submerged In fact, it was a Frenchman, one Marie Davy, who constructed in 1854 a device consisting of a vertical tube with 45° mirrors at top and bottom which first made practicable observation from within the submarine The field of view of this instrument was, naturally, very limited

Since the submarine is primarily an offensive weapon and is itself highly vulnerable, it depends for its safety and effectiveness on its invisibility Its efficiency, in fact, may be measured by the keenness of its observation of the enemy And it is significant that even at the start of the present century the view was held that 'cursed with blindness, the submarine will forever remain blind and therefore will never satisfactorily perform its great task" In 1906, however, when the first submarine for the German navy was launched at Kiel, it was already possible to equip the boat with fairly well perfected periscopes The published developments of periscopes up to about ten years after this time are the subject of this paper

Problems of Design

Field of view in instruments of small diameter and great length

The simplest form of periscope consists of a tube with plane mirrors at 45° at both upper and lower ends A more efficient arrangement of this same principle obtained by substituting total reflection prisms for the plane mirrors and known as the *tube optique*, was used by Daudenard in 1872 (See Fig 1) In order to provide a large field of view these early instruments were usually 300 mm in diameter and less than 1000 mm in length giving a field of view of about 10° half angle

Such a viewing arrangement in a modern periscope with a diameter of 130 mm and a length of 5 meters would allow a field of view of about 1½° half angle a value that is far too small If however, an objective of short focal length is placed following the first prism an image will be formed near the lens in its secondary focal plane but too far from the eye-piece (placed after the lower prism) to be observed directly A third lens of long focal length, however, may be added to the system to receive the image formed by the objective and reproduce it inverted in the primary focal plane of the ocular (See Fig 2) Thus, the eye is virtually located much nearer the objective end of the tube with a resulting increase in the field of view In a periscope with such simple optics however, the quality of the image would be inferior due to the various aberrations inherent in systems of simple lenses In 1876, incidentally, a cystoscope comprising just such a simple optical system was constructed by Nitze

If, on the other hand, so called collector lenses are placed near the secondary focal plane of the objective and near the primary focal plane of the eye lens the pencils of rays which are aimed toward the edges of the system (because they originate near the edges of the field of view in object space) are bent toward the center of the inverting system And if this inverting system, instead of being a single lens, consists of two achromatic cemented lenses widely separated it is possible to reduce the diameter of the tube while increasing its length and at the same time improving the quality of the image (See Fig 3)

The system shown in Fig 3 may, in fact, be visualized as two telescopic systems with a common axis, the first with its eye piece (lenses 0, and C_1 comprising the ocular) toward the incident light and the second telescope with its eye piece (C_2 and O_2) toward the observer The two objectives of course, face each other The first telescope, therefore, minifies rather than magnifies the object while the second telescope magnifies its object, which is the reduced imaged formed by the first telescope

The magnification of the system as a whole, then, is

$$M = \frac{M_2}{M_1}$$

where the magnification of each telescope is denoted by the proper subscript If, for instance the magnification of the two telescopic systems are +12 and +18, respectively, the magnification for the periscope is accordingly +1.5

*NOTE The optical tube" has been called variously periscope, cleptoscope hyphydroscope, omniscope and has reached a fairly high state of development however as mentioned in the Britannica, the problem of seeing *through* the water still awaits solution

Rotation of the Periscope

One of the earliest problems whose solu tion has been eagerly sought by periscope designers is that of viewing the entire hori zon at a glance and many ingenious solu tions have been brought forward however, as will be shown later their weaknesses have offset their advantages with the result that the most pra ticable solution has been simply the complete rotation of the peri scope Now in view of the cramped quar ters in a submarine it is not practicable for the entire instrument including the eye piece to rotate as a unit. Furthermore such an arrangement would add greatly to the observers fatigue which designers have for obvious reasons, undertaken to minimize wherever possible

One of the two arrangements whereby the upper part of the peri-scope, containing the objective is rotated with a stationary eyepiece presenting an image that is cor rectly oriented includes an erecting prism (Dove prism) in the optical system Since the erecting prism in common with a ro tating miror revolves at half the angular velocity of its image, when the image is to remain fixed the Dove prism must be made to rotate at half the angular speed of the periscope objective and this is accom plished by means of bevel gears, one that is fixed with regard to the eyepiece section of the periscope one that rotates with the objective, and a third gear that rolls be tween the two and is connected to the Dove prism Now since it is impossible to obtain very large pieces of optical glass that have a constant index of refraction throughout, it is necessary to add the erecting prism to the system at a point where the rays are close together as is the case following a telescope whose magnification is such that the emergent angle of the main rays from this telescope does not exceed the limiting angle of the Dove prism The mag nification then of the succeeding telescope or telescopes may be made such as to give the desired overall magnification

Magnification of the Periscope

When periscopes equipped with optical systems first came into use it was believed that distances could best be estimated if the magnification were unity (or as the layman would say "no magnificat on") for then the size of the retinal image would be the same with the instrument as with the naked eye It was found, however that when free natural sight is hampered by limiting the field of view with a screen or aperture the observer believes the image to be diminished The magnification was therefore at first increased to 1.2 then to 1.3 and finally to the present value of 1.5 which might well be termed "normal mag nification" or in other words the magnifi cation at which most persons believe they are seeing the image in natural size

As will be explained below the periscope is frequently supplied with a device for quickly changing the magnification to a power of five or six in order the better to study details of the object under observa tion The obvious method of providing a rapid change of power would be to ar range for a second eyepiece however it has been found preferable to manufacture the periscope so that it may be installed as a unit without protruding parts that might be broken when the instrument is lowered through the water tight gland In addition any protruding part stands the risks of being broken due to the close quarters in the commanding tower of the submarine The most undesirable feature however is the small exit pupil that would result from the use of a shorter focal length

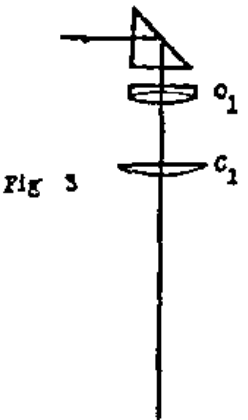


Fig 3

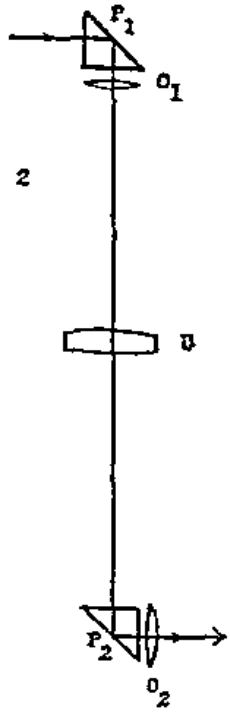
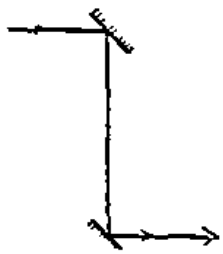


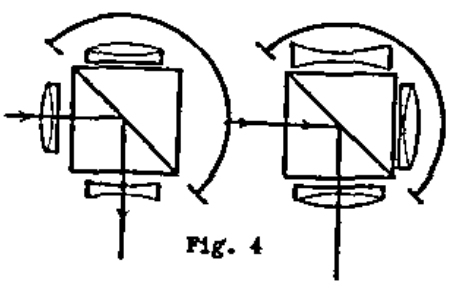
Fig 2


Fig 1

(or higher power) eyepiece, since the aper ture stop of the system and its distance from the ocular would remain unchanged

For the above reasons, therefore it is more advantageous to obtain a bifocal system by means of changes in the objec tive part of the system and this may be accomplished by various methods. For in stance a common arrangement is to install in the head of the periscope a rotating body bearing two right angle prisms with the hypotenuse faces silvered and cemented together so that each may become the en trance-reflector In front of the *base* sur faces of the two prisms then and mounted as close to them as possible are the var ious elements of the two objective systems as shown in Fig 4.

In another instance an additional tele scopic system of low power is mounted in front of the entire periscope and since it is characteristic of a telescope focused at infinity that an infinitely distant object is imaged also at infinity but correspondingly larger the optical characteristics of the peri-scope itself are unchanged If the pow er of the "prescopic" telescope is 2, then the magnification of the periscope is doubled when the auxiliary telescope is added and if the low power telescope is turned through 180° so that its eyepiece is presented to the incident light, then the power of the periscope is halved Fre quently arrangement is also made for the


Fig. 4

additional telescope to be swung through 90° so that the magnification of the periscope is unaffected, as indicated in Fig 5

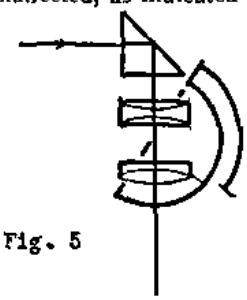


Fig. 5

Low power "pre' telescope

Illumination in the Periscope

In common with every other optical instrument the brightness of the image as seen through the periscope is determined by the relations of focal length and aperture on which the diameter of the emergent light beam depends and by the physical properties of the glass which determine the light loss due to reflection and absorption

The exit pupil of the periscope, through which pass all rays that contribute to the image is the result of some physical stop within the periscope If the pupil of the observer s eye coincides with the exit pupil of the periscope and if the two pupils are of the same size then the entire quantity of light leaving the instrument will enter the eye of the observer, and he will view the object with the same brightness as though he were using his naked eye (except for light losses within the instrument due to absorption and reflection) If the image is very bright as in daytime observation the image as seen by the eye is not brighter than if seen unaided for the iris of the eye contracts to compensate for the added brightness If on the other hand the exit pupil of the instrument is smaller than the pupil of the observer's eye as may occur in night observation, then the brightness of the image is limited by the size of the exit pupil of the periscope

It seems desirable then to give the periscope as large an exit pupil as is compatible with the best definition and with the maximum allowable diameter of the periscope tube for since the exit pupil is the image of the entrance pupil (as formed by the system as a whole) it is dependent on the diameter of the two objectives at U and U (See Fig 3)

Up until now it would seem by considering the lens system of a periscope as two astronomical telescopes with a common axis and with the objectives facing each other that there would be no limit to the possible separation between these two objectives In other words it would seem that the tube length could be increased indefinitely without appreciable change in the field of view and this is sensibly true however the fact is that there is a limit beyond which the objectives may not be separated without undue loss of brightness in the marginal portions of the field For tunately, the eye is insenstive to brightness differences between the center and the margin of the field provided the latter is at least half as much as the former

When required by the demands of tube diameter and length, the periscope may have three or sometimes four telescopic systems in series, however, due to the light loss caused by the introduction of additional glass in the system and also because each lens added to the system contributes its share to the deterioration of the final image, no more than four telescopes are ever connected in series in a periscope

In order to get some idea of the magnitude of brightness loss due to absorption and reflection in a periscope, let us assume an instrument containing eleven separate elements of which 17 air glass surfaces are crown and 5 are flint (This is similar to the periscope shown in Fig 5) The reflection loss for rays that are incident normally may be found from the formula

$$\frac{(n-1)^2}{(n+1)^2} = \frac{(0.51)^2}{(2.51)} \text{ for crown} = \frac{(0.62)^2}{(2.62)^2}$$

for flint

Reflection loss = 4.1% for crown,
= 5.6% for flint

Thus, the light transmitted (without yet considering that lost through absorption) is

$$(1-0.041)^{17} \quad (1-0.056)^5 = 37\%$$
(transmission)

If the absorption loss is 1% per 3 cm of glass path measured along the axis and if in the periscope considered the sum of axial thicknesses is 30 cm then the absorption loss equals 10% of the incident light And the total transmission of the periscope is about 33% (0.90 0.37), or about one third of the incident light for light of maximum visibility

If on the other hand all the unexposed surfaces were coated with thin layers of a transparent medium of such index that the reflection loss were about 1% for each air glass surface, with the absorption loss unchanged the total transmission of the system would then be about 73.5%, or an increase of about 220% in brightness of the image It may be of course that present day periscopes make use of coated lenses to reduce reflection losses in the system

Mechanical Aspects of the Periscope

Although external influences which impede vision such as the vibration of the submarine and the periscope while traveling the occasional moistening of the upper prism or its protective glass covering, and the like can not be eliminated still they may be mitigated by appropriate devices

The main tube of the Barr & Stroud periscope is usually made of a bronze of high tensile strength The bronze is non magnetic and is perfectly resistant to corrosion under seagoing conditions In addition it retains its polished surface to a remarkable degree, thus insuring sweet working in the gland When a steel tube is considered advisable, it is recommended (by Messrs Barr & Stroud) that a non magnetic and non corrosive type of steel be used The composition of this steel has to be held to definite figures within narrow limits and the treatment to which the tube is subjected in the course of construction has to be carefully controlled By wrong treatment it is possible for the tube to be put into such a state that although it may satisfy the initial tests regarding strength, corrosion and magnetic properties, it may in service develop inter crystalline corrosion

The periscope enters the submarine through a long stuffing box (the gland) atop the conning tower It is very important to be able to rotate the periscope completely about its axis and also to be able to withdraw the periscope as for instance, in passing under another ship The power required to raise and lower the instrument is supplied by winches hydraulic or pneumatic devices Because the long stuffing box increased greatly the difficulty of rotating the instrument and thereby added to the fatigue of the observer especially since the pressure of the water when the submarine was under way caused the tube to bind against the after side of the gland, an improved method was devised wherein the rotating periscope is in a separate tube inside the tube that slides through the gland

Although the periscope is carefully tested for water tightness, it is impossible to prevent a slow increase of humidity of the air enclosed within the periscope When the vessel submerges the air within the periscope is cooled and clouding films appear on the lenses and prisms To avoid this the air in the periscope which is tightly sealed during operation, is periodically replaced with dessicated air The two valves with which this is accomplished are located near the bottom of the periscope, one valve connecting to a thin pipe line to the top of the periscope

(Concluded in September issue)

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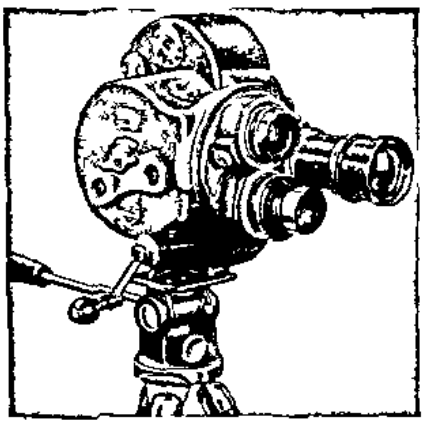


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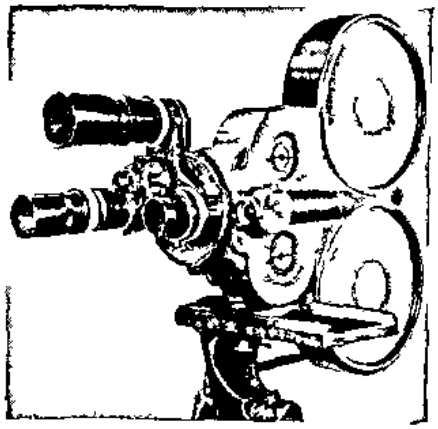


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PATENTS

By ROBERT W FULWIDER, *Patent Attorney, Los Angeles*

No 2 285 262—Process and Apparatus for the Printing of Subtractive Multicolor Images June 2 1942 *Emil Fess Oberndorf* and *Willelm Schneider* Dessau Germany assignors to General Aniline & Film Corp N Y 4 claims (Cl 95 9)

A pair of rigid diaphragms having alternate *opaque and transparent sections, and intervening* filters having corresponding alternate colorless and colored transparent sections each filter being in a different one of the primary colors and capable of being shifted with relation to one another and to the diaphragms

No 2 286,628 — Photographic Device June 16 1942 *Frank W Kidder* Los Angeles California 12 claims (Cl 88 24)

Includes a work board upon which finished positive which is to be corrected and an undeveloped positive are positioned *sources of light directed upon the positives* and iris members interposed to control the colors of light with means to adjust the iris apertures simultaneously

No 2 286 662 — Color Photography June 16 1942 *Edith Weyde* Cologne Riehl and *Erwin Trubert* Leverkusen Wiesdorf Germany assignors to General Aniline & Film Corp N Y 8 claims (Cl 95 2)

A process for avoiding color fog in multilayer material used for the production of color pictures in which the several emulsion layers contain color formers and between two such layers a yellow filter layer is located carrying colloidal silver the color development being conducted in the presence of hydroxylamine

No 2 286 747—Sound Film June 16, 1942 *Leopold D Manes* New York N Y and *Leopold Godowsky Jr* Westport Conn assignors to Eastman Kodak Co Rochester N Y 12 claims (Cl 95 2)

A method of production of sound images in multi-color films confined principally to the upper layer or layers and composed of silver or silver and a dye to produce a sound track dark in color preferably black

No 2 286 940—Method of Projecting Color Pictures June 16 1942 *Gerald F Rackett* Los Angeles California assignor to Technicolor Motion Picture Corp Hollywood Calif 3 claims (Cl 88 16 4)

Method of obtaining proper balance of color between color film and light from *projector by tinting screen to compensate* for variations in color values

No 2 287 481 — Exposure Meter Film Carton June 23 1942 *William C Lockwood* Chicago Ill 1 claims (Cl 88-23)

A photographic film carton openable at each end having a movable flap carried by the carton arranged to form a transverse partition in the carton and including visual or optical light measuring means

No 2 287 568 — Method of Producing Motion Picture Film Illustrating Surgical Technique June 23 1942 *William Poy Jue* San Francisco Calif 4 claims (Cl 35-17)

Photographing successive appearances of a portion of the body that are graphically portrayed on separate sheets illustrative of successive stages of an operation and manually performing the steps of the operation on each sheet necessary to produce continuity of action between said successive appearances and to show the actual surgical technique employed in performing the operation the photography and the manual operations occurring simultaneously

No 2 287 792—Apparatus for Controlling the Feeding of Film June 30 1942 *Warren Dunham Foster* Washington Township N J 23 claims Cl 88 16 2)

Motion picture projection apparatus combined with sound reproducer including spring pressed arcuate film take-up mechanisms spaced upon opposite sides of the projection aperture and over which the film slides

No 2 288 165—Film Treating Apparatus and Process June 30 1942 *Victor C Krupa* Woodcliff Lake N J and *Harold R Fleck* New York, N Y assignors to Vaporate Co N Y 4 claims Cl 95 89)

Process of treating exposed and developed film by supplying a substantially uniform application of heat to dehydrate without warping the film and immediately thereafter treating the heated film with vaporized chemicals

No 2,288 483—Apparatus for Photographing Titles on Motion Picture Films June 30 1942 *Michael Ruiz* Chicago Ill 6 claims. (Cl 88 24)

A vertically movable camera support, a frame adjustable horizontally with respect to the support carrying an easel for mounting the subject to be photographed by the camera and an auxiliary focusing lens mounted between the support and the easel arranged for movement horizontally and vertically

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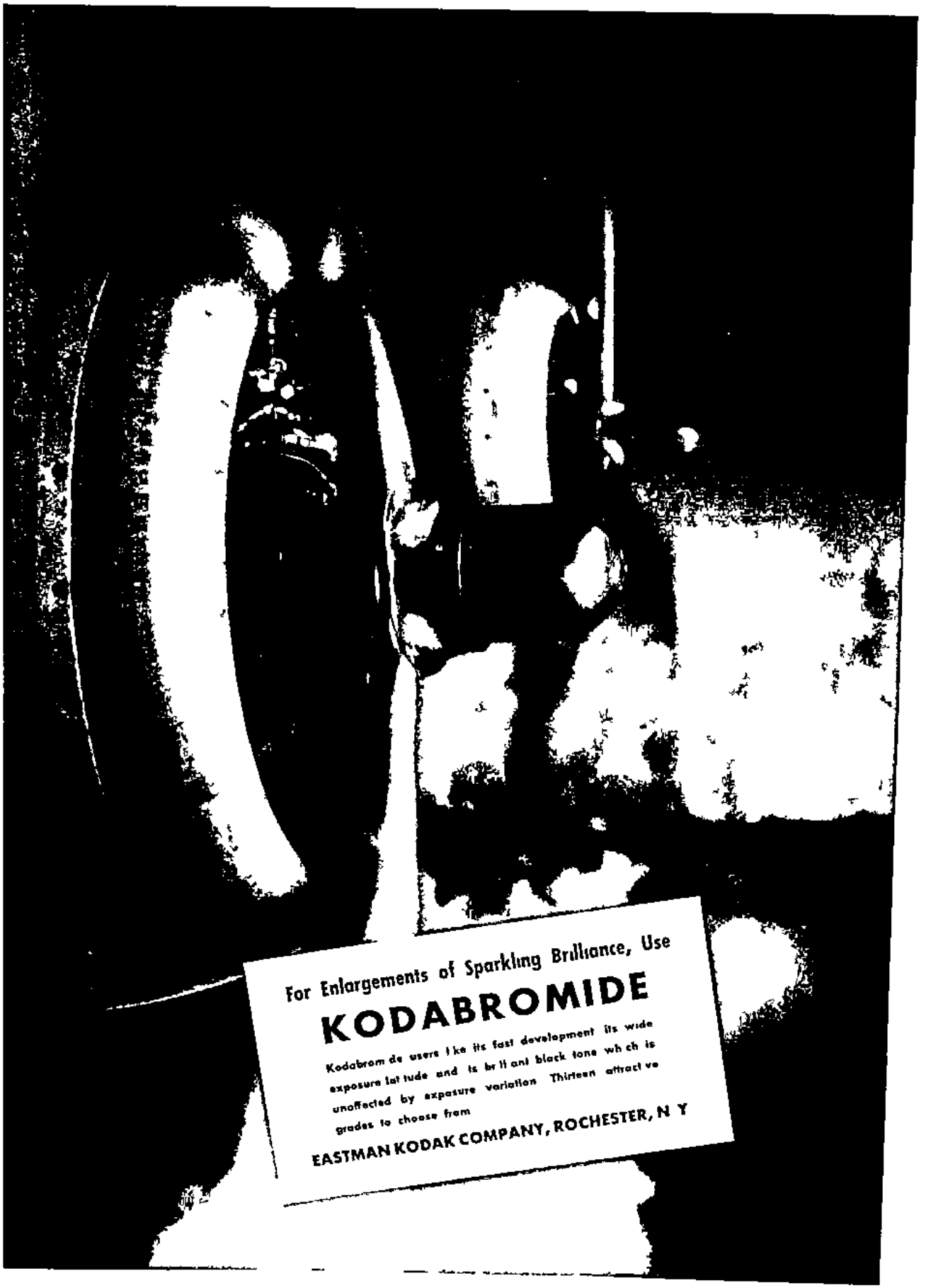
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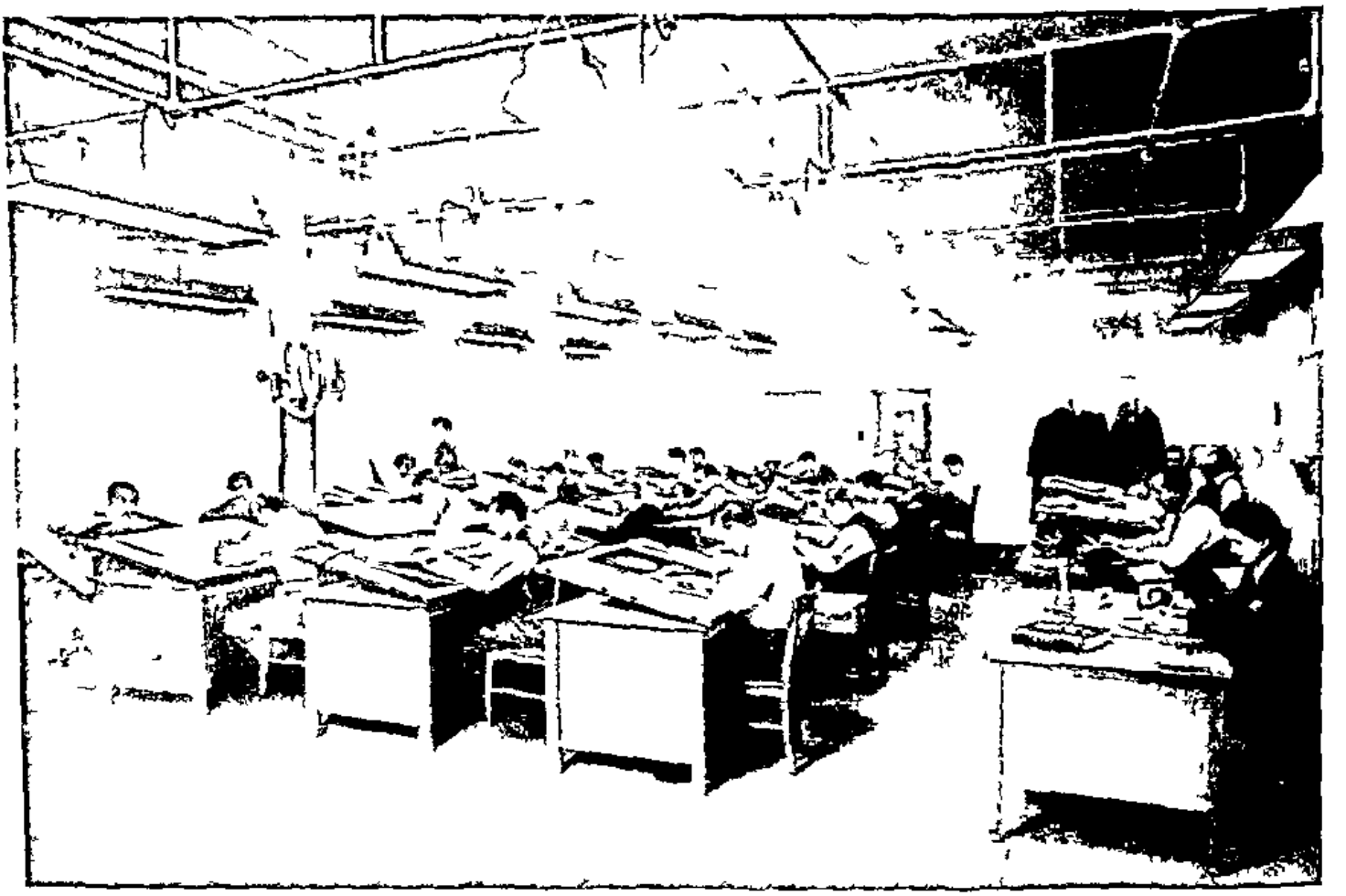
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Part of the staff of artists in the Catalog Illustration Department at Douglas Aircraft Company. Paul Kunz, head of the department, is seated at the second desk at the right.

pity THE MECHANIC

(Continued from Page 9)

Some of the best artists that before war time were working in the motion picture industry are now in this department at Douglas.

Incidentally this department which is known at Douglas as "Catalog Illustrating Dept." is the first known group of its kind in the aircraft industry.

A plane grounded isn't of much use either in defense or attack. If you want to reduce it to dollars and cents the commercial airlines figure that it costs about a hundred dollars per hour for a grounded plane and that can run into real money if it takes a week or more before you even find out what it is you want to order.

Mr. Paul Kunz and his crew of artists have done a great work at Douglas and are continuing to do so and are getting more work each day. Their quarters will be enlarged within the next few weeks and the employees more than doubled.

There are lots of things about this war that seem relatively unimportant but when looked at in their true perspective they are mighty important and on this particular thing along came a Yankee "with a boat and a clothes line."

B & H Catalog Supplement

Civilian Defense and other patriotic groups are turning more and more to the use of motion pictures in their training and morale meetings. Films have been found to be the best possible stimulator of attendance and enthusiasm under such headings as War Reports, Official Government Films, Victory Gardens, Emergency First Aid, Industrial Defense, Plant Training, American History and Principles, Protection Against Fire Bombs and Air Raid Warden Work.



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They Say···

By RELLA

● Tom Dowl ng now in U S Naval Forces

● Emmett Bercholz and Roy Clark now commis ned First Lieutenants in U S Army Air Forces

● L W O Connell in from New York where he was working for Columbia u ng New York cameramen and other I A crafts The cooperation received and the friendl ness that prevailed made the work excep t onally ea y

● Art Arl ng in from po nts west now holding the rank of Lieutenant Senior Grade for his fine work

● Bob Hager who was one of the first to leave for service fl es a PYB Catal na bomber snd is doing an excellent job of it aga nst our enemies

● Harry Jackson getting to be quite a traveler Now in New London, Conn., with technician Gu tafson and assi tant camera man O Neal later being joined by Leon Shamroy and Frank Steiner and Frank Landy of New York

● Off to Seattle Charlie Boyle and Char lie Selarno with assistants C. W R ley and John Greer and still cameraman Frank Bjerring

● Every once in a wh le we dig up some-thing personal in the history of a member Now we find that Gifford Chamberlain of Technicolor used to race motorcycles and now rides one to the stud o every day feel ing quite at home on t

● Charles Mohn Chief Petty Officer in the Navy is in town observing and say ing l ello to friend

● For Whom the Bell Tolls" is on loca tion in Sonora with quite a group of the boys there but not enough for a quorum Included are fir t cameramen Rennahan and Roberts seconds Thompson and Roe assi tants Satterberg Stone Hamilton Bob King loader still cameramen Coburn and Richardson

● Now in service is Paul Uhl, of Techni-color as Lieutenant Junior grade

● Enlisted in the Photographic Unit of the U S Army is Alfred Baalas

● Commissioned for a special unit in the Air Force we find Captain B ll Clothier

● Sgt Roy Ivey of the S gnal Corps now in New York.

● Off to Tampa Florida, is one of the largest units of its kind to go out Firt cameramen, J mmie Howe Charlie Mar shall and Elmer Dyer second cameramen, Don Anderson Fleet Southcott James Knott, Aaron Hower Bill Reinhold Buddy Weiler Rod Tolmie still photographer Marty Crail loader James Sloan, picking up Burruss and Blache of Ch cago Local 666 as second cameramen

● And speaking of Rod Tolmie who has



Steve Newmart, Photographer 2nd Class, U S Navy Art Arling Le Sr Grade and Keith Wheeler *Chicago Times* war correspondent

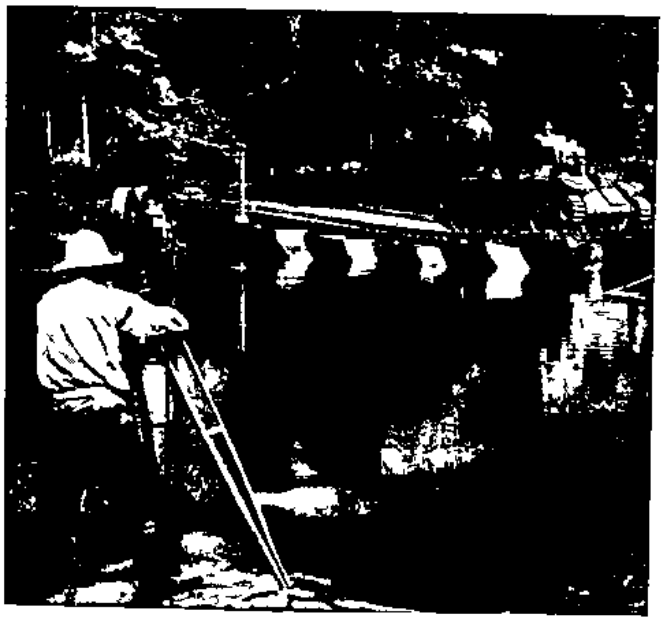
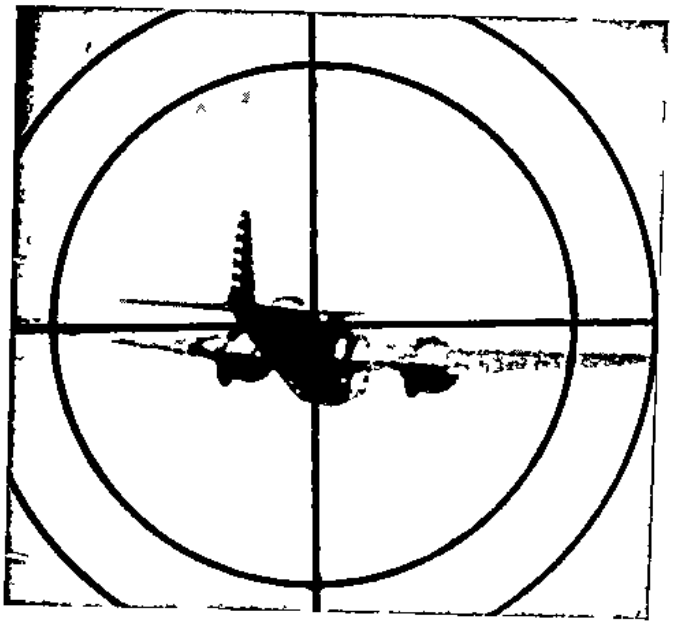


Photo by U S Army Signal Corps.

Army Signal Corps



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Army Air Corps



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been doing most dangerous motion picture air photography for about twelve years—ever since "Hell's Angels"—and has come through without a scratch not long ago dived off a diving board into a shallow pool and fractured three ribs Rod is okay again and says hereafter he prefers to do his diving in the air

● Off to Santa Fe New Mexico for Republic Bill Bradford first cameraman, Burnett Guffey second James Higgins and Walter Rankin, assistants

● Bob Surtees has been elevated to the rank of first cameraman His first major production is one for Sound Masters produced by General Motors Corporation and based on a script directed to elevate and build morale among the American people Supervision by Frank Donovan

● Ted McCord off to Saratoga Springs for Warner Bros., where he will be joined by a crew from Local 644

● Harold Tannenbaum of RKO has joined the Weiler unit as sound man He is a member of Local 695 which union reports that more than seventy of its members are now serving the country in the armed forces

● On location with Lester Cowan who was organization minded many years ago producing a Commando picture featuring Paul Muni being shot in British Columbia are Bill Mellor first cameraman Neil Beckner second Bill Jolley and Skippy Sanford assistants and Ned Scott still cameraman



Silas Edgar Snyder

Si Snyder Passes On

Silas Edgar Snyder, affectionately known to his friends as "Si," passed on July 13 1942 at Gardena, California, after a long illness

Si, a native of Illinois, was well known in the days of the silent picture having been associated with the old Balboa Studios in Long Beach and with the Rockett Brothers on the picture "The Life of Abraham Lincoln"

He was editor of the *American Cinematographer* in its early days and later editor of *International Photographer*

Our deepest sympathy goes to Mrs Elenita Snyder, his widow

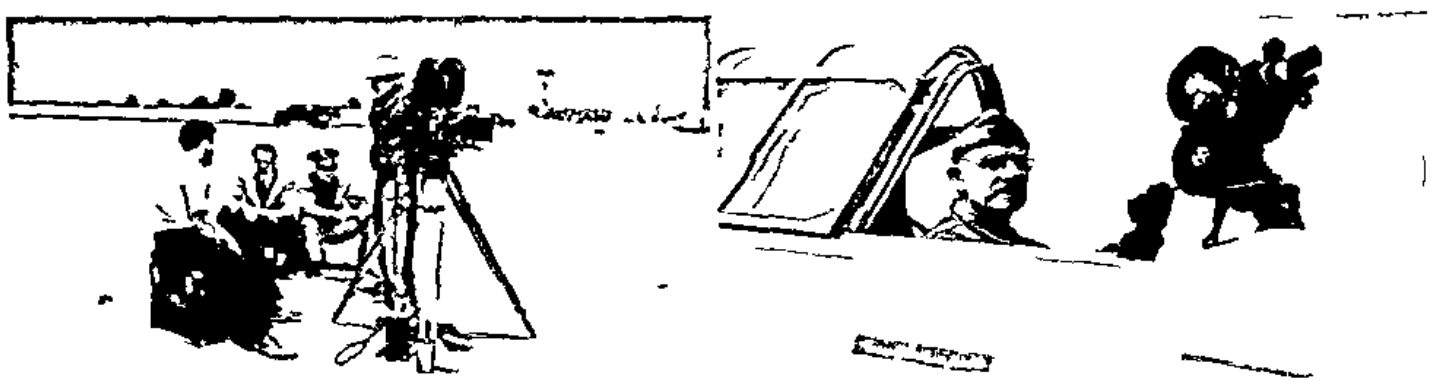
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Reggie Lyons civil service cameraman attached to Signal Corps Wright Field Dayton Ohio. These pictures were taken "somewhere in Florida"

Following is a letter from Reggie Lyons to P L Shamray

Buffalo New York
July 8 1942

Dear Pete

Well long time I no see you I am getting along swell here with the Signal Corps Training Films at Wright Field Dayton Ohio

I have been all over the country making pictures for the Signal Corps I was just down in Florida and Georgia for six weeks making an Army film. I put in twenty hours in the air shooting infra red and got some beautiful results The weather was nice while I was there

I also spent six weeks in Denver Colorado over six weeks in New York City had a trip to Chanute Field in Illinois and made a picture at Bell Aircraft in Buffalo New York Am now here again in Buffalo where I have been for two weeks and expect to stay here six weeks more Then I am going back to New York to make some more pictures there

I worked with a Russian director in New York named Dr Arakton Did you know him out in Hollywood? He is a fine man

My wife is here with me I travel all over in my Ford We spent last Sunday at Niagara Falls It sure is a great sight Well Pete give my regards to Sim Aller and all the boys at Dupont and say "Hello" to all the cameramen for me

Well Pete I feel like a million and like my job Good luck to you and drop a line to your friend

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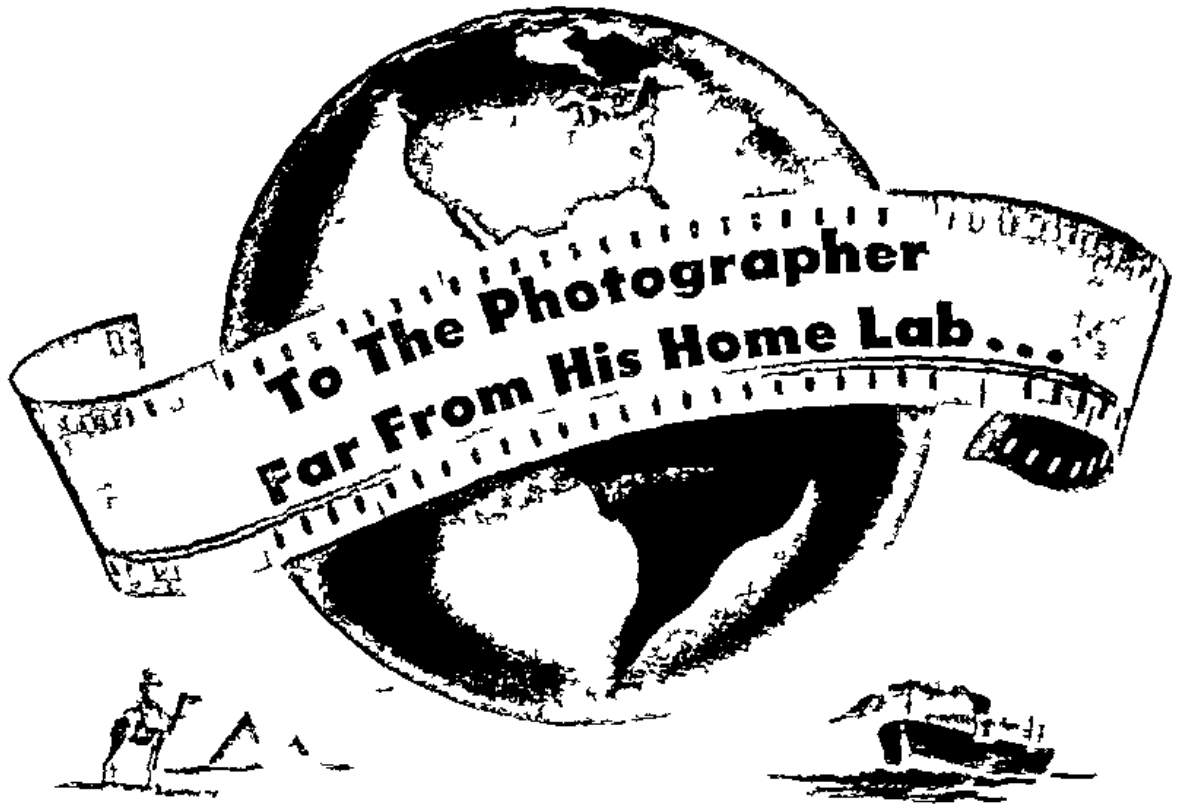
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Vol. XIV September, 1942 No. 8

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Editor, HERBERT ALLER

Business Manager, HELEN BOYCE *Art Editor*, JOHN CORYDON HILL

Contributing Editors GEORGE HURRELL, BERT LONGWORTH, ROMAN FREULICH, ERNEST BACHRACH, ROBERT W FULWIDER, FRED GATELY, GEORGE SCHEIBE

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In the shadow of their d rector Robert Florey are Dennis Morgan and Irene Manning co-stars of Warner Bros. Technicolor production "The Desert Song" Photographed exclusively for *Internat onal Photogra pher* by Bert (Budds) Longworth

TECHNICOLOR CINEMATOGRAPHY

By Winton Hoch*

This article is reprinted from the Journal of the Society of Motion Picture Engineers, August 1942 issue, by permission of the S M P.E., the author and the Technicolor Motion Picture Corporation (Editorial Note)

This essay does not in any way pretend to be a comprehensive coverage of the equipment, methods, and problems of the Technicolor cameraman at the present time, but is intended rather to present some of the items that might be of general interest Inasmuch as the general technics of motion picture photography are well known and have been frequently discussed in the literature, there will here be presented some of those aspects that are peculiar to, or receive emphasis from, the fact that the camera is photographing in color

These aspects arise in very large part before photography, and of all the preparation activities that take place before the actual start of photography, two that are very important to the Technicolor cameraman are color design of the sets and costume color selection The importance of proper color design and costume color selection cannot be over-emphasized. The set colors should be chosen with care for hue chroma, and value, and with a knowledge of the costumes to be used the relative importance of the set, its cutting and physical relationship to the other sets and the orientation of these factors with the script While it is true that the cameraman can control the set effect to a large extent by his lighting of it, this color control work must be carefully handled or the screen result will not be optimum Obviously the more adverse conditions the cameraman meets the more the production is likely to suffer either in screen result or lost production time to correct those adverse conditions or both These two factors of set and costume color probably go farther than any other group of factors in representing the difference between a black and white production and a color production The net result might be termed the color score' of the picture It might be compared to a musical score sometimes flashing and brilliant and at other times subdued It follows that if the problem is ignored discords usually occur

Obviously without sets and costumes in color the only colors left are flesh tones A very interesting color emphasis effect was demonstrated in the RKO picture *Irene* where an entire set was designed in neutral tones and the star wore the only color

To handle this very important set and costume color contact the Technicolor Motion Picture Corporation has available the services of a color control department to advise on the color design of the sets the evaluation of costume colors and allied problems This department has a background of experience from all productions and its experience and highly developed judgment are available through the normal functioning of the department, to each new production as it comes along This department is the spearhead of the Technicolor photographic activity

The make up problem is handled, as in black and white pictures , by the studio make-up departments, although the color cameraman does have the responsibility of requesting the 'touching up' of the make-up as it may be necessary, and he very often has special problems that require close collaboration with the make up man For instance, on exteriors with the actors working in sunshine, they usually begin to sunburn, and make up changes must be made in many cases to handle these gradually tanning complexions Frequently this means a new make up problem in order to keep the camera appearance of the flesh tones the same It can readily be seen that this can become a difficult job The reverse is also true As the troupe begins stage work after returning from the exteriors their tanned skins will slowly fade and the problem of compensating by make up continues Occasionally we have had difficulty due to physical exertion on the part of the principals causing faces to flush beneath the make-up which effects the camera appearance

The color camera is very discerning of flesh quality and we find it necessary to include in the make up area the neck and throat, and the hands and arms if they show On rare occasions no make up at all is used and it is frequently omitted when photographing babies as their clear smooth skin generally needs no correction

It should be kept in mind that generally speaking the primary function of make-up is to correct extremes in colors cover blemishes and generally reduce the tone range observed in any average group of persons If one will note the varying complexions of people, he will readily appreciate that if three or four persons were lined up side by side to be photographed it would be highly desirable and probably very necessary to correct the flesh tones and greatly reduce the tone spread This must not be interpreted as meaning that all flesh tones should appear alike Variations of tone are very desirable It is the extremes that are undesirable Obviously a white man with a heavy tan who photographs like an Indian is not a very convincing white man The most critical care is given to the close ups, especially of the principals The care and attention given to the problem are of course, directly proportional to the screen importance of the skin tones

A great deal of time and money has been spent in solving the make up problem, and literally thousands of feet of film have been exposed and printed on various make up tests to discover the best make up materials and technics for the color camera A proper make up requires highly skilled artistry in its application

Other important items to the cameraman are his lights Here, color photography again introduces an important factor of which the cameraman must be cognizant, and which must be watched very closely on certain types of work That factor is color temperature Our present three strip Technicolor cameras are balanced to an average daylight color temperature For true color rendition, especially in the pastel shades and neutral grays this temperature should not vary on the set by more than about $\mp 250°$

There has been in the past some misconception regarding the status of incandescent lamps (designated in the studios as 'inkies') with respect to Technicolor photography Some people have understood that the Technicolor cameras are changed over by filters and prisms to accept an unfiltered incandescent lamp color temperature Others have indicated that they thought that the camera automatically corrected any unfiltered inky light that might be added to an arc lighted set These conceptions are wrong

The filters prisms and film of our present three-strip Technicolor camera are all balanced to daylight and this balance is used both for exteriors and interiors This simplifies the production problem a great deal First of all there is manufactured and used only one set of film emulsions This means that manufacturing ordering, shipping storing exposing and developing are all standardized for one system with all the obvious attendant advantages not the least of which is a lower negative cost

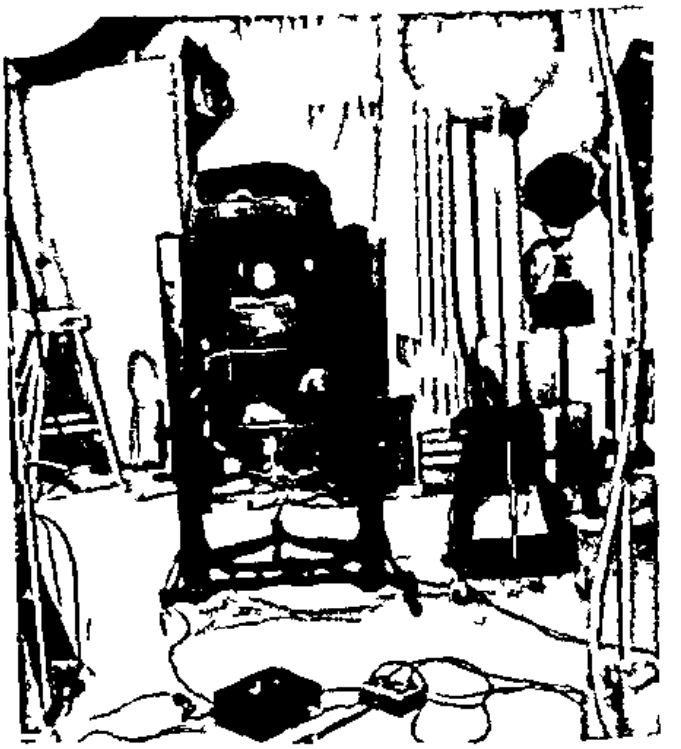
This single standard also simplifies set lighting problems both interior and exterior All regular Technicolor lighting units have been balanced to this daylight

(Continued on Page 18)

*Technicolor Motion Picture Corp Hollywood Calif

High speed flash photography





Left, Fig 1 lighting set-up for portraiture Shown in the picture are George Hommel, cameraman William Gorseman electrician and Lynn Merrick, Republic starlet Right, Fig 2, camera and lighting as the subject sees it Stills by William E Thomas



The finished portrait by George Hommel.

Republic Studio is one of the younger studios in Hollywood yet this organization has been pioneering in the use of high speed flash in its still gallery for more than a year The gallery is equipped with six Kodatron units which are made by Eastman under the stroboscopic patents of Prof Edgerton and his associates Purchased early in 1941 the lights were first used to shoot fast action stills on "Ice-Capades," both in black and white and in color Since that time however under the direction of George Hommel Republic portrait photographer many uses have been found for lamps beyond the mere stopping of action for the still camera

The stop-action principles is of course accomplished by the extremely short duration of the flash which is approximately one thirty thousandth of a second In actual use with the still camera, the shutter opens, the flash takes place and the shutter closes This can be done either by using a synchronizer on the shutter or by the "open and shut" method, although when used with a studio camera (8x10) the latter procedure has been found to be best The lights may be used singly or all fired at once by means of an electrical hook up made either by wiring them together manually or by the use of photo-electric cells which are fastened to the individual lamps. (See fig 5) These cells close a circuit in the lamps and fire them with a lag that is claimed to be *less than three-millionths of a second*, thereby attaining complete synchronization among all the units

For gallery portraiture in black and white it usually

By Herbert L. Westrate,
Still Department, Republic Productions





Left Fig 3 typical set up for color Right Fig 4 set up for color as the subject sees it

isn t necessary to use more than two or three l ghts and some effects can be obtained with only one unit The problem involved is that of controlling the broad source of light and much care must be taken to gain the proper modeling Mr Hommel took the portrait of Lynn Mer rick, Republic starlet with a lighting set up similar to that shown in figure No 1 The camera and lighting from the subjects viewpoint are shown in figure No 2

The Kodatron lights have been especially useful in the making of Kodachromes because there is an exceptionally faithful reproduction of color and no possibility of movement since the speed of the flash will stop it completely Once the subject has been placed and the camera focused the photographer can capture any mood no matter how fleet ng and thereby get hundreds of pic tures that would be impossible if it were necessary to freeze the pose Another advantage is the absence of hot l ghts since it is possible to adjust the lighting by th e modeling lights in the un ts and then flash the picture without having to burn up the subject In mak ng Kodachromes Republ c has found that a mini mum of six lights is needed in order to gain suff cient illumination and depth of focus A typical set up for color is shown in figure No 3 Figure No 4 shows the set up from the subject s viewpoint

Fini hed prints made with Kodatron flash lamps are amazing in their sharpness and clar ty and blowups of unusual s ze are poss ble The results attained by Re publ c in this type of photography show that great pic tures can be expected from the valley studio

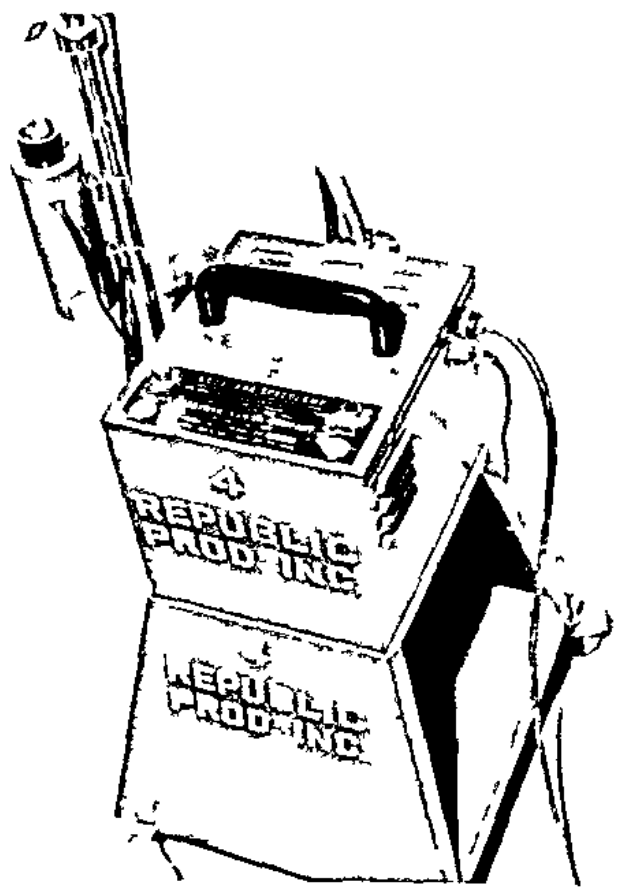


Fig 5

Portraits by Roman Freulich Universal Pictures









Top Acquanetta (see page 16) lower Teresa Wright who gets ther first top billing in Un ersal s Shadow of a Doubt

"When King Meets King"

By Frank King

"New York calling was the greeting I received one morning not long ago It was the editor giving me an assignment to the Niagara frontier of King Peter, the 18 year-old monarch of Yugoslavia who was visiting this country in the interests of his people I was told that he was getting weary of having his picture taken, in fact a few days before he had refused to allow any newsreel pictures to be made of him and nothing much had been made since King Peter s meeting with our President in Washington

Armed to the teeth with film and a grim determination that this young man would not get away from my territory without at least giving me a good argument why pictures should not be made, I set out on the morning of his arrival in Buffalo New York and met the official party at Plant No 2 of the Curtiss Wright Corporation My guide proved to be one of the officials of the Public Relations of the company and I was taken at once to the office of the Vice President Mr Burdette Wright where to my amazement I found not only a lot of high officials, but King Peter himself registering into the plant and receiving the badge which all visitors must have

I had previously registered in another office so felt I was prepared to go to work when His Majesty was ready In a few minutes word was passed that the King was to be taken on a tour of inspection through the Curtiss plant Having had my clearance through the War Department to make pictures in the plant (all of which had to be censored at Washington) I got in line with the party feeling that at any moment the King would spot a newsreeler and say NAY!

On his first stop at one of the various departments I was able to get in front and make a few scenes of him as he looked over parts used in a plane The King even went so far as to turn his face my way when looking at a part, possibly not knowing it was a newsreel man he was facing On and on he went and at my suggestion word was passed that it would make a good shot if the King would climb into a P-40 and look it over Again I was surprised—the King climbed into the cockpit of the plane instead of asking that the newsreel cameraman be beheaded

About an hour later the party was taken to a country club for luncheon Of course I followed Once at the club I conceived the idea of some really good candid shots of King Peter in no official capacity when someone asked him if he would like a cigarette As Mr Wright held a lighter for His Majesty I went to work to get an informal shot when the King called to me "Someone might object to my smoking on account of my youth When I explained to him about the many youths of this country younger than he, who smoke he passed it over with a gesture then started a conversation about photography in which he is greatly interested He seemed astonished to see me making movies for a newsreel with a small hand held camera he thought anything like that required more elaborate equipment



Left to right Larry Bell President Bell Aircraft Company Burdette Wright Vice President Curtiss Wright Corporation King Peter and Frank King newsreel cameraman

Then the waiter appeared to ask what the King would like in the way of refreshments before lunch and he ordered—a coke Then Larry Bell and Burdette Wright our hosts came into the picture to see what had intrigued their royal guest, with a cameraman taking up most of the scene of action

Mr Bell related to King Peter how the other King (myself) had many times photographed the Bell Airocobra on the ground and in the air and took great pride and satisfaction in telling the King that it was I who got the picture of a Bell Airocobra making a "belly landing" a few years ago with the temperature around zero and my having to wait out in the extreme cold for about forty five minutes until the pilot had exhausted his supply of gasoline before trying to make this landing He recalled how with the light failing fast, I had to change over to faster film and then the King became more interested than ever

Until now nothing had been said about the pictures that had been made of the day so upon learning of the schedule for the remainder of the day I thought of a few things that perhaps my new acquaintance might do to make better pictures So—for the rest of the day in our trips around various defense plants I had the King shooting machine guns in the test pits of the Bell Aircraft plant He got a great kick out of sitting in a plane on the ground and shooting at—well I asked him if he imagined that Herr Hitler was in front He laughingly replied No such luck He even went so far as to run a locomotive for me with the officials of the plant as passengers And this was the young man who was going to be "tough to photograph

After I had thanked King Peter and before he was whisked away by the official party I said "I'll photograph you again sometime when you and your bride visit Niagara Falls on your honeymoon" He blushed and I was left with what I thought was a swell news story on a regular guy—King Peter of Yugoslavia

With Hyman Fink

Staff Photographer
Photoplay Movie Mirror
and Radio Mirror



Rita Hayworth and Victor Mature at the Ballad um just before Victor entered the Coast Guard



Linda Darnell Allen Gordon and Mr and Mrs. Stephen Crane (Lana Turner)



And—here's how still cameramen look when they go in reverse before the camera instead of behind

Hyman Fink dropped in at Warner Bros. during filming of the fight sequence on the new Errol Flynn picture and persuaded Bill (Budd) Longworth Madison Lacey William Wallace Fred Morgan and Mickey Margold to line up for a still

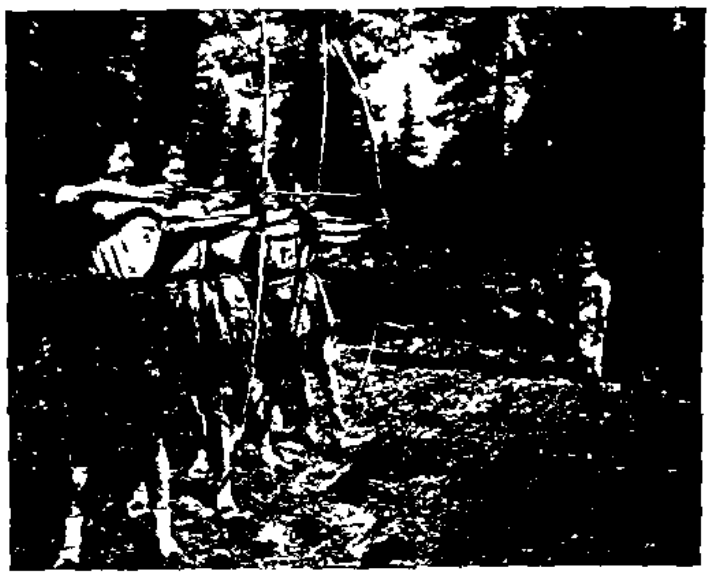
"Here We Go Again," RKO Radio Production

Stills by Alex Kahle









ON LOCATION AT BIG BEAR—upper left Indian Dance right Indian camp at Bart lett Lake, lower left Mortimer Snerd "horns in", right Hey Bergen, I can t move!"

About Charlie McCarthy

Charlie McCarthy co starring with Ed gar Bergen Fibber McGee and Molly in RKO Radio s HERE WE GO AGAIN would be listed by the stud book as by an Idea out of a block of wood

Idea was that of Edgar Bergen who has been Charlie s inseparable companion ever since latter s creation

Born in Chicago of Swedish descent, February 16 1903 Bergen early began developing gift for voice mimicry studied ventriloquism as a boy from paper backed pamphlets became full fledged ventriloquist on day he made his mother s pies converse from the oven

Fascinated by tough wise-cracking Irish newsboy who haunted the school corner during his high school days Bergen con ceived the idea of carving a dummy for use in his ventriloquial efforts in newsboy s likeness and manner

Charlie thereupon came into being and during Bergen s years in high school and later at Northwestern University played vaudeville and chatauqua engagements with creator thus helping pay school and college bills Bergen won degree Charlie didn t

Successful in vaudeville after college days Charlie became international figure when introduced with Bergen on Rudy Vallee s air show in December 1936

Then followed movie fame culminating at moment in "Here We Go Again in which for the first time on any screen Charlie both sings and dances

Bachelor 3 feet 4 red haired wears monocle hobby The Ladies

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NIGHT SHOTS IN DAYLIGHT

The Desperados" Columbia Production **Stills by Jim Fullerton**





Due to d m-out regulat ons Columbia has been experiment ng in shooting n ght exteriors by daylght These photographs are examples of the results obta ned The top picture shows Raymond Walburn (white hair) Franc s Ford Randolph Scott Porter Ball Edgar Buch anan and players. Lower picture shows Randolph Scott Glenn Ford and Edgar Buchanan

War dimout orders of the Fourth Army Command along the Pacific Coast that, at first thought indicated considerable interference with production of night shots in motion pictures, were met swiftly by Columbia Studios, which had the problem solved a week before the deadline date of August 15

Harry Joe Brown producing the Technicolor western feature "The Desperadoes" arranged his shooting schedule and by use of trick photography photographed all of his night sequences in broad daylight

By matting out the blue sky cutting down the exposure fifty per cent and using yellow filters Cameraman George Meehan achieved perfect night effects

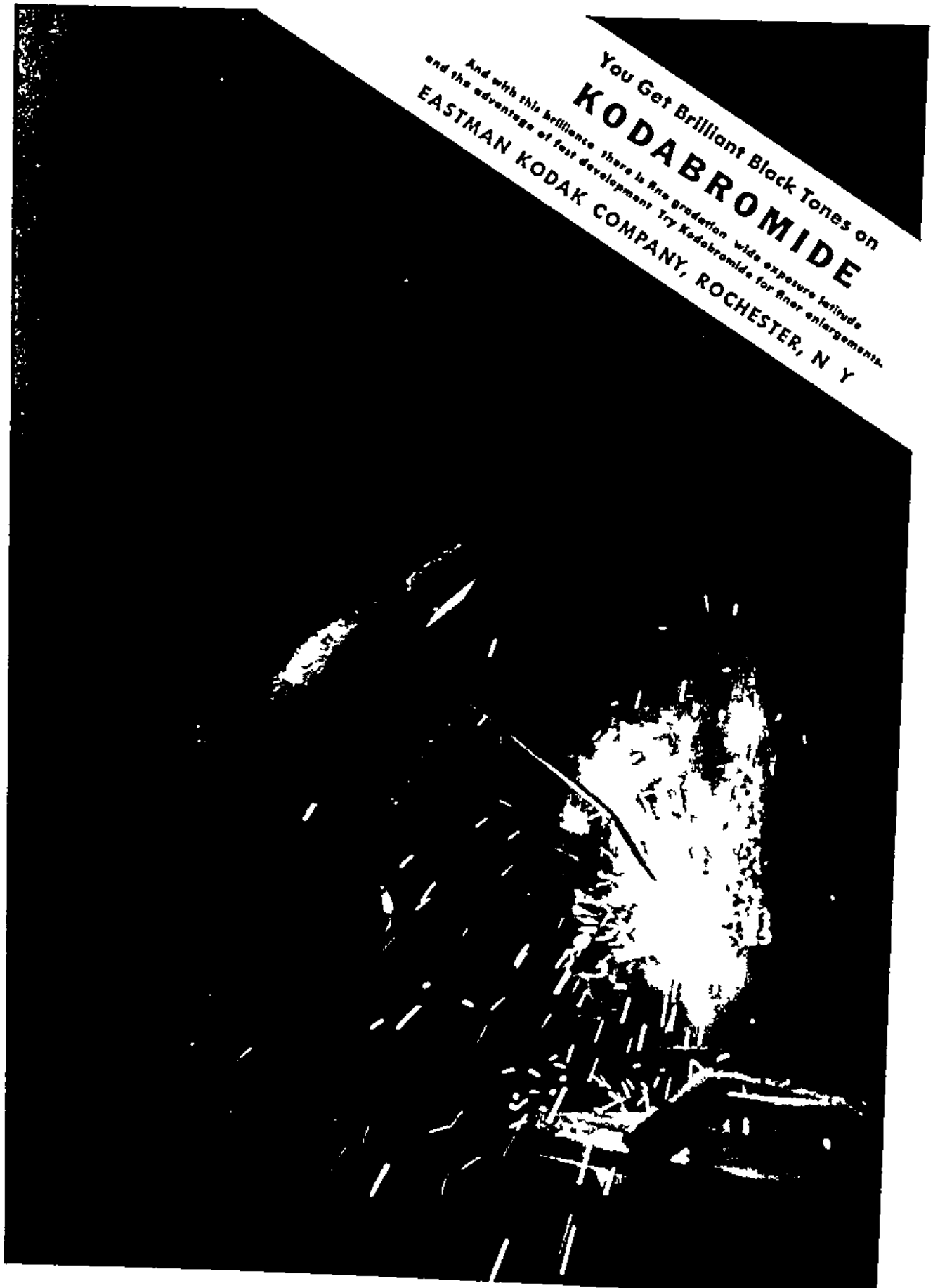
Because of the fact that the picture was being made in Technicolor blue red and yellow jellies" were used over the lamps to gain color effects and the lights in windows were tripled to show through the broad sunlight

Clay Campbell head of the Columbia make-up department, contrived a special flat make-up for Randolph Scott, Glenn Ford Claire Trevor and Evelyn Keyes to eliminate reflection under the increased light

For close up shots at the entrance to buildings the problem was simplified by throwing a black tarpaulin over all except what is actually within lens range and employing the usual Technicolor lighting

The successful experiment of Columbia with "The Desperadoes" is expected to result in more day shooting of night shots when the emergency is over for reasons of economy If for instance the scenes in the Columbia Technicolor picture had been shot at night it would have required at least one hundred lights and as many electricians

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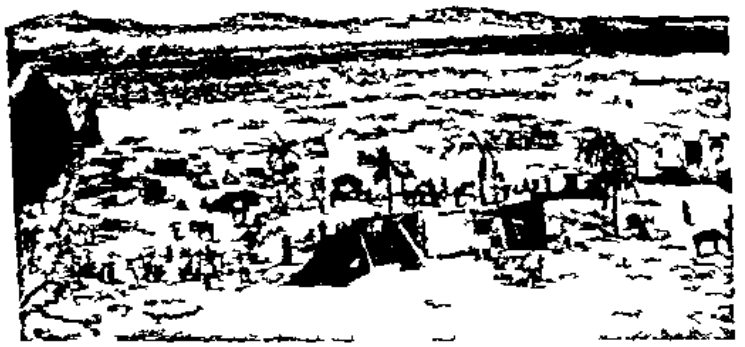








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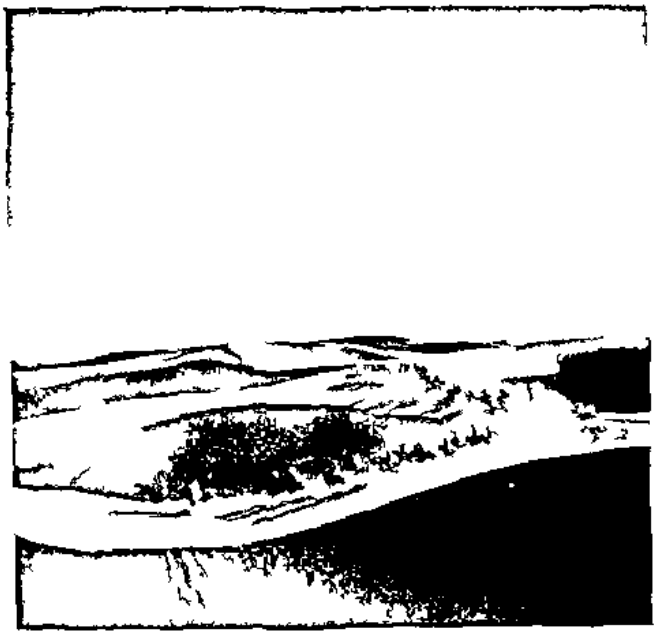


The only trouble w th pho ography ng "The Desert Song n the desert was the desert. Al o ra tlesnakes, but they don t count

Actuall thoush, Warner Bros. four week location trip to Gallup, New Mex co, and en rons wa. an arduou. a s ignment for the whole ca.t and crew tand that ncludes the cameramen but t could ha e been ten fold a tough had t not been for the careful preparat ons f r the t p and for the complete cooperat on and effic enc of everybody concerned

We carr ed three d ffe ent Techn color camera un ts, ea h requ ing a personnel of fi e men When we dsco ered that five men were not ava lable for each of the

Stills by Mac Jul an









SONG"

By Bert Glennon

un ts th s was one of our first p oblems) Ben Cohan a s s ant cameraman conce ved the dea of fitt ng out a ho se w th a camera ack to carry the equ pment of one un wh ch made t po ble to el m nate the wo k of fou men s n e only one was needed to gu de the ho se And that l o se was a beaut ful wo ker He toted the equ pment up ncl nes of as much as 60 deg ees

The pesk est of all wo r es—and a ch on c one—was the sand storms They whooped up daily on schedule—about 2 p m Du t, the cons stency of f ne flour be-clouded the a mosphe e caused acute d scomfort to membe s of the company and made t mposs ble for us to work We wo e spec al gog·les and t ed handker ch efs o e our mouths—and usually re red to the camera





it was es

van which soon became the headquarters for most of the crew

There was one thing we avoided doing—that was inspecting the cameras while we were out on the desert Naturally, we took a chance on something going amiss with them But we figured we'd rather take that chance than face the certainty of the fine sand harming the mechanism were we to open the cameras on the desert We were lucky there because the cameras worked perfectly with the exception of some hinges that were badly worn by the constant rubbing of grit.

Many times it was necessary to use ropes on the cameras to carry them to a high place for particularly tricky long shots And it was always necessary to use rubber tired dollies and build tracks of planks to keep the cameras from sinking deep into the sand Once though we were able to use the rails of a narrow gauge railway to carry the cameras That's when we were on location at a coal mine southeast of Gallup

In transferring the equipment any distance across the sand we used two teams of horses and a caterpillar tractor to pull the trucks On one occasion for a running shot of horses and riders going from 40 to 50 miles an hour, it was necessary to use four men to keep the camera from bouncing or from swaying off the camera car

There were two other principal location sites besides the coal mine They were at Chinlee 100 miles from Gallup and at Red Rock At Chinlee (that, incidentally is where we slept in the girls' dormitory of an Indian reservation school) is the only real red sand desert, and this was the first time it has ever been photographed in Technicolor

Another slight headache was the nuisance of shifting sands If we didn't complete a certain take by nightfall the next day we were likely to find that the sands had shifted considerably and the whole contour of the place altered You can imagine what a job it was to maintain the same sand outlines day after day But we did it, thanks to men like George Nogle Henry Kruse Phil O'Neal, George Dye, Harry Marsh and Ben Cohan who worked closely with me on the entire photography assignment.

I remember it was an unhappy crew who arrived at location one morning to find that the wind had blown down a complete village set and the sand had covered it inches deep But moments like that weren't too many

Oh yes, about those rattlesnakes. I always preceded the crew when we went to a new location And believe me I always carried a gun. And if I had notched it for every rattler I did away with it would look like one of the James boys' weapons'

ACQUANETTA

Don't let the name Acquanetta fool you She is not from Venezuela as Elsa Maxwell and others of the international set believe She is not the Latin beauty about whom Lucius Beebe and the late Cholly Knickerbocker rhapsodized for society and the cafe set

Acquanetta is American

Not only that, Acquanetta is an American Indian

She was born the daughter of Blue Skies and Laughing Water in of all places, Ozone, Wyoming Blue Skies and Laughing Water were members of the Arapahoes tribe, a branch of the Algonquin nation

When Acquanetta was three years old, her parents died in an influenza epidemic, and she was taken in care by Linda Smith, a Cheyenne Indian For the next seven years Acquanetta (phonetic Anglicism of "Laughing Water") lived with the unmarried Linda

Then when Acquanetta had reached ten, Linda Smith met Winged Eagle, a member of the Utes tribe Winged Eagle wished to return to the southeast of Wyoming to where the tribes of the Shoshone nation bivouacked and settle down He intimated Acquanetta was an encumberance not desired

Acquanetta had met during the year a couple whose names were Don and Anne Brothers. He was a painter, she a writer of Indian folklore They took Acquanetta into their trailer home, and for the next seven years she travelled with them, their stopping off places dictated by possible material for Anne Brothers' search of authentic Indian folklore or Don Brothers' eye for a landscape

Acquanetta left the couple in New England where Anne Brothers was tracing the Narragansett tribe, and the ruggedness of the New England landscape was being captured by Don Brothers

Acquanetta became a nurse to two children in a middle class New England couple's home staying just long enough to accumulate enough funds to take her to New York City She was unable to make an impression upon Manhattan and retreated to New Jersey for a year There she obtained work as a nurse waitress and drive-in hop saving her money and dreaming her dreams.

When she had accumulated $1 000 Acquanetta returned to New York City and lived uptown in the Spanish colony By now at the age of 18, she was a natural beauty with olive skin and smoldering eyes, and a volatile temperament. She easily learned Spanish

Acquanetta then moved to a hotel famous as the home of many of Manhattan's most favored models and debutantes Her fresh friendliness soon brought hundreds of eligible bachelors in pursuit of her favor

Club 18 El Morocco, the Stork, Colony and other top-drawer clubs began to see much of Acquanetta Newspapermen habitues of the clubs talked about her wrote about her and her fame became widespread

When her $1,000 (not much of its was left after Acquanetta had purchased clothes and other feminine frivolities) was almost non-existent, she became a model Overnight, she was a success Photographers demanded her services She had fortuitously started her career when fashion magazines and designers were going South American

All of the United States was interested in the Good Neighbor policy, and Acquanetta, with her Spanish accent and her dreams was catapulted into tremendous prominence

John Powers signed her The fashion magazine leaders — Harpers Bazaar and Vogue — featured her face and figure Bradshaw Crandall, Arthur William Brown McClelland Barclay, and other world renowned illustrators sought her services as a model

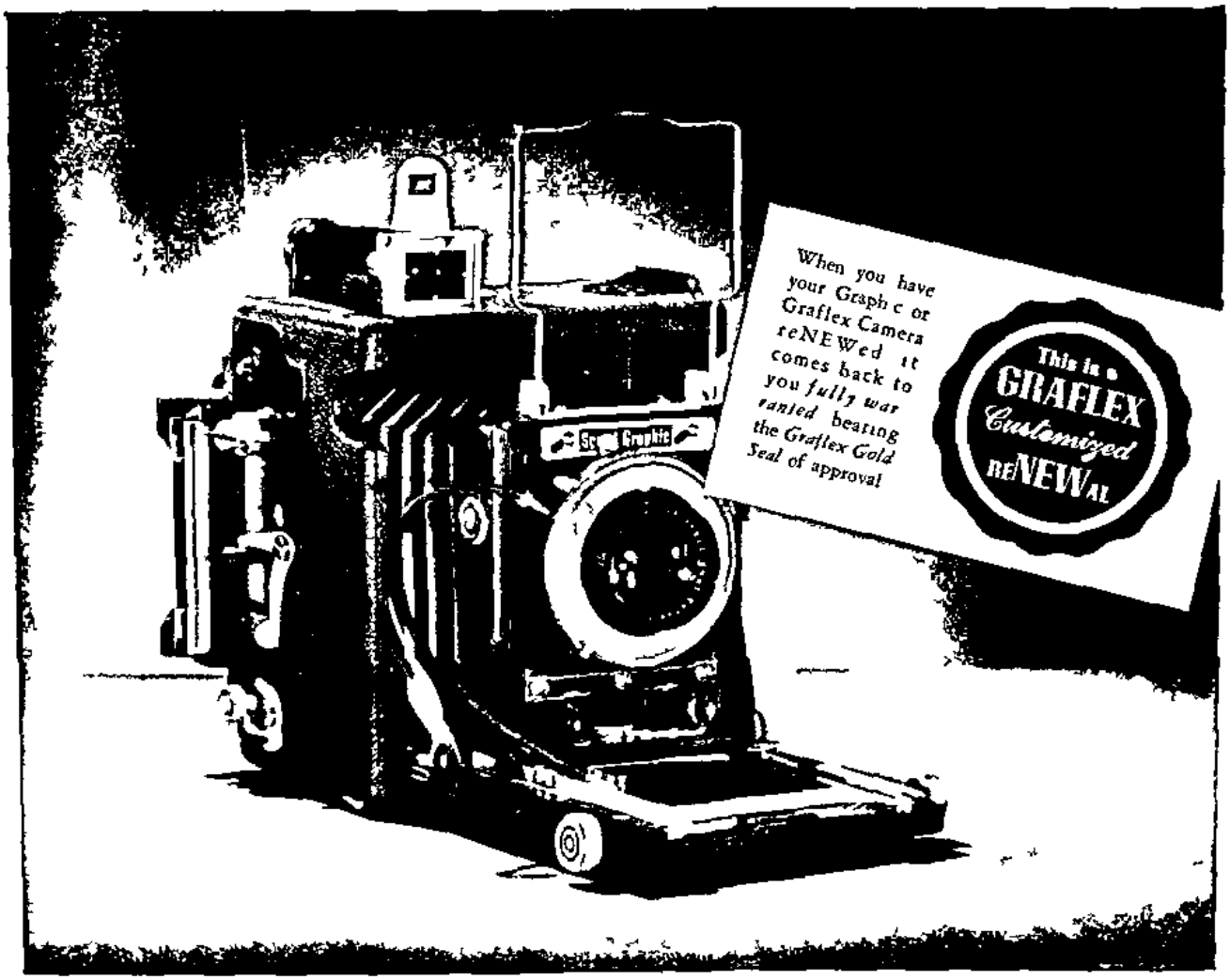
She was a success beyond any model's dreams She was being paid $200 a sitting Other models, even the most famous, rarely have been paid more than $50

Famed national and international political and social figures paid her homage Gossip columnists felt the daily stint a poor one without mention of Acquanetta the Venezuelan beauty Acquanetta her face a feature of every magazine her name on every New Yorker's lips left all this fame and offers of fortune if she'd marry into them, to come to Hollywood

To all intents and purposes she was on her way to Mexico to do Latin fashion sitting for Vyvian Donner, newsreel fashion authority But Hollywood newspapermen returning from a Gotham premiere junket, persuaded her to come to Hollywood

Astute Walter Wagner who was preparing his Technicolor production of 'Arabian Nights" for Universal at the time gave Acquanetta a minor role in the picture When the "daily rushes" were viewed Universal executives immediately signed her to a long term contract on her 21st natal day July 17 Acquanetta had arrived, and was on her way to stardom—the first American Indian with an almost certain chance of attaining that lofty pinnacle in screenland

Acquenetta's second appearance before the cameras is opposite Charles Boyer in "Flesh and Fantasy," which he and Julien Duvivier are co-producing for Universal



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Technicolor

(Continued from Page 3)

color-temperature by actual and repeated tests with the Technicolor camera Therefore they may all be used interchangeably as far as color temperature is concerned The only other factors governing their use are the very direct functional ones such as size of unit, light output of unit, operational characteristics of the unit, the type of light that it gives (that is, whether a "hard" light or "soft light), and the unit efficiencies with respect to light output vs current input, and with respect to light output vs the throw required of the unit for the particular job in hand

The more common units used for general production are (HI = high intensity)

The 120-ampere HI arc
The 120-ampre HI arc
The white flame Twin Broad arc
Inky Sr spotlight
Inky Jr spotlight
Inky Baby spotlight

Among others less frequently used but in many cases no less important should be mentioned many special converted lamps a 60-ampere HI arc spot, and a 10-kw corrected inky lamp

The light-sources used for photography might be classed in four general groups as follows

Daylight
High intensity arc light
White-flame arc light
Incandescent light

The daylight, of course is our standard for color temperature The HI arc lights are all corrected for normal work with a 1 1 gelatin filter placed in front of the arc light This filter was especially made for Technicolor using a special non fading yellow dye supplied by us The exact filter strength is determined by camera test. The white-flame arcs were balanced to a daylight color-temperature by the National Carbon Company and therefore require no filter of any kind The incandescent lighting units must fulfill two requirements to meet the daylight color temperature standard They must first be equipped with incandescent bulbs burning at a color-temperature of 3350 K, and second they must be fitted with a tested Macbeth glass filter All General Electric bulbs marked *C.P* will burn with a color temperature of 3350 K when operated at their rated voltage It should be emphasized that the rated voltage must be supplied, and in the case of the arcs, the proper amperages and proper gap lengths and positions must also be maintained.

Daylight as a source probably presents fewer troubles, although very early in the morning and very late in the afternoon trouble is frequently encountered An interesting difficulty occurred early one afternoon when the smoke from a forest fire filtered the sunshine to such a brownish orange hue that it was necessary to abandon the location for that day

The conditions just outlined do not have to be met at all times but they should be adhered to if a pure white light is necessary and desirable for the work in hand Certainly there is no limit to the effects obtainable with colored lights For instance frequently straight unfiltered flickering inky lights are used to produce a warm glow on the costumes and faces to simulate firelight. Artistic sense and experience must dictate the extent to which colored lights are used The colored light possibilities have been frequently used perhaps most recently and extentively in the colored shadow and live action sequences in *Fantasia* Its first featured use in three-color pictures was in the first three color production *La Cucaracha*

The rigging and lighting of a color set is similar in many respects to that of a black and white set, with the exception that lighting units balanced for Technicolor are the units used unless effects are in order Most Technicolor sets rely upon arc-light units for the bulk of the lighting The large sets especially use the larger arc units Some of the very small sets are from time to time lighted entirely by corrected inky light Inky units are valuable also on big sets as auxiliary lighting units They must be watched for age and cleanliness, as an aged bulb and a dirty reflector filter and lens can substantially reduce the lamp output Needless to say cleanliness is also an asset with arc light lenses and proper maintenance and servicing of all lighting units are important

Exterior sets and set ups are also handled in a very similar manner to black and white set ups Scrims nets reflectors and booster light all play their part. It should be noted that the so-called gold reflector is not acceptable in color work (unless for effect) for obvious reasons

The color temperature factor is once more introduced when reflectors are extensively worked The term *daylight* has been advisedly used By definition daylight is the light from the entire sky including direct sunlight if the sky is clear Sunshine has a color temperature of about 5,500 K, while blue sky has a color temperature varying from 10 000° to 20 000° K When reflectors are used as lighting aids they select only the sun which is reflected into the scene and introduce a filler light that is warmer in tone than daylight. In addition, it must be remembered that the so-called silvered surface which is usually aluminum or tin reflects slightly less blue than it does red and green This factor also adds slightly to the effect of a lower color temperature For these reasons reflectors are not considered as desirable as booster light for some purposes This is especially true of close-ups where flesh quality is of critical importance

Process photography in Technicolor is now largely a matter of routine The scenes selected for process work are, of course, subject to the usual limitations for that type of work, but astonishing results have been obtained. Progress in this field can be largely attributed to two factors improvement in plate quality, and improvements in background projector equipment. As Technicolor production film is processed day by day the technical crews improve in skill and the research groups add their contributions, to the end that the process plates now furnished to the studios are specially printed for the optimum contrast, color-quality, and density required for this type of work The equipment combinations of each studio have been photographically tested for color balance and this color balance is also taken into account when the plates are printed

It has been found that background projectors vary appreciably in the color-quality of the projected light Generally speaking the projectors using reflectors have a little more blue in the light than the condenser projectors although this color-quality varies appreciably depending upon the condition of the reflector and the nature of its surface or upon the glass used in the particular condenser set up in use Some condenser lenses have a very pronounced yellowish cast that is not very desirable for color work.

There has been appreciable pressure in the last few years aimed at increasing the background projector output The present high outputs have resulted from improvements in carbons objective lenses, projector optics behind the objective lens, and lamp house and in the successful combination of several projectors for throwing superimposed matched, and synchronized images onto the process screen Astonishing progress has been made toward increased output, and fortunately these developments reached the point where they were incorporated into production equipment before the present war appreciably curtailed progress in this line

The Academy of Motion Picture Arts & Sciences and many studios and equipment companies have all contributed to this projector improvement problem. As a result, we very frequently photograph screens in color more than 20 feet wide and have photographed, in color process screens approximately 28 feet wide This size was used in the Paramount-de Mille production *Reap the Wild Wind* A shot has recently been made by the same studio using a split screen including a total camera spread of 50 feet This was accomplished with the aid of two triple relay projectors incorporating the recent improvements previously mentioned In this emphasis on large screens it should not be forgotten that miniature screens also have their uses and can be successfully handled on the same general basis as the large screens

The problems faced by the color camera

man in handling process photography are generally about the same as those found in all process work However, he must be very color conscious and on his guard against an off-color projector light and improperly burning foreground lights He must also be very careful of his foreground to background balance, as a background that is carried too high will often present a burned out appearance that greatly alters the color values of the plate, and destroy the illusion of realism that he is striving to create

Modern Technicolor camera equipment closely parallels the black and white studio equipment in its principal operational features and functions There are available, for the camera, lenses of 25, 35, 40, 50, 70, 100, and 140-mm focal lengths They are all in carefully calibrated mounts that fit onto a master focusing mount on the camera In almost all cases focusing is accomplished by actual measurement to the focal plane desired, and then the lens is set on this indicated calibration Repeated tests have shown that this method is more accurate than eye focusing Eye focusing is seldom resorted to unless the focal distance is so short that it exceeds the lens calibrations The stop calibrations on the lenses are all photometrically determined and calibrated on an arbitrary arithmetic scale These lenses have all been specially corrected for Technicolor work A very interesting and very valuable follow focus aid, which has been standard equipment since the manufacture of the cameras, is available to the assistant or technician in the form of a pair of selsyn motors One is attached to the lens mount, and the controlling motor is held in the technician's hand, or fastened to some support if desirable, permitting the technician to be 50 feet or more away from the camera and yet maintain accurate control over the lens focus This is of especial value when the camera is put into the sound "blimp," making actual rigid mechanical connection with the lens mount unnecessary This is very helpful on sound shooting inasmuch as the camera unit inside the blimp is actually floating in rubber and has no direct mechanical contact with the blimp except through this sponge rubber

The non rigid relationship between camera and blimp suggests another problem that has been solved in a very successful manner That is the problem of attaching a finder for the use of the camera operator Obviously if it were attached to the outside of the blimp the camera inasmuch as it is floating could be framed differently from the way indicated by the finder This was solved by designing a very compact finder, and attaching the main optical elements to the camera Auxiliary optical elements are available for use depending upon whether the camera is used with or without the blimp This compact design has the additional advantage that this same finder is used with the camera for almost 100 per cent of the work thus only one finder and one set of mattes are necessary for each camera, and the camera operator has only one set of finder conditions for which to make allowances Auxiliary finder allowances are *always* necessary to compensate for the parallax errors both in front of and behind the focal plane for which the camera is adjusted

The camera motor arrangement is highly flexible and worthy of special note There are eight types of motors and eight combinations of motor to-camera gears, all of which can be changed in the field The only requirement of the cameraman is to specify the kind of shooting expected and the electrical current or the kind of distributor system to be used The regular cameras can also be successfully operated running backward at full speed Speeds higher than 24 pictures per second, either forward or backward, are not permitted with the standard cameras

The camera unit has available all the standard camera mounts to which the industry is accustomed The wild camera can be mounted on anything from a camera spider to a high tripod, and any other piece of equipment as may be desired, such as dollies, three wheel perambulators, four wheel velocilators, booms, rotating mounts etc The camera, incidentally, has been successfully operated in all possible positions

For sound shooting the standard camera is used in connection with either a "barney" or a blimp The barney is necessarily not so efficient from a sound standpoint as the blimp, but it is very useful in a great many places The regular blimp is a highly efficient piece of equipment, and of course requires heavier mounts than the wild camera but it can be accommodated on all types of mounts Those most popularly used are the blimp "high hat" four wheeled "velocilator," and a variety of booms

There are many items of special equipment available to the Technicolor photographer that are far too numerous to mention in detail Among them should be mentioned, however, the variety of equipments and mounts used for air photography, the camera blimp and mounts used for underwater photography, and the speed-cameras capable of consistent operation at so called six times normal speed, or 96 pictures per second

The question has been asked if an extra standby camera was kept on the set at all times to replace the camera in use when the film ran out, because it took so long to thread the Technicolor cameras This it not true The actual threading time of a Technicolor camera is only about three minutes, for a skilled technician, and many units work with only one camera On major production units, however, an extra camera is usually kept on hand, threaded, to prevent any possible loss of production time due to many reasons Sometimes a reduction of the three minute threading time is desirable, and when sound shooting is involved and a certain emotional tempo or mood has been established with the principals, unnecessary mechanical interruptions are highly undesirable Frequently the director requires two cameras on a shot, and the fact that the supply of extra cameras is often many miles from the stage has an important bearing upon the desirability of this extra camera The additional cost of the extra camera is a very minor item and the camera usually saves much more than its cost by the saving of production time

This equipment has been in service for many years, and has successfully met the test of almost all climates, altitudes, and conditions The cameras have been in all parts of the world—into the crater of Mt Vesuvius, under the sea near Nassau, almost 20,000 feet above the Andes in South America, in tropical climates, and in sub zero temperatures

Cartoons and all types of animation photography also should be mentioned The bulk of the cartoon and animation work is now handled by adapted black and white cameras using the successive-exposure method These cameras are set up with



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a balanced set of three color filters in the optical system at some point, the filters either rotating or sliding and the color exposures are made by exposing one frame of film through each filter successively At the head end of each roll of film a special chart is photographed permitting the laboratory to identify the various frames This negative after development, is printed on a step printer that prints each third frame only Thus the records are separated and the prints handled in a manner similar to other standard prints This method is limited to work where no movement takes place during the exposure and great care must be exercised in the lighting exposure registration development, and color balance of the film The cameras must be serviced to rigid mechanical specifications and the lenses should be color corrected A great deal of careful work must be done to set up such a system and reasonable care observed in the shooting Once the system is set up,however these items are handled largely on a routine basis and with reasonable facility This type of photography can not be intercut with the standard three-strip negative unless dupe negatives are made

Other very valuable technics and facilities that are available and are very successfully executed in current production today are glass shots double and multiple exposures double and multiple printing wipes fades and lap dissolves made in the laboratory and many combinations of these The possibilities are numerous

While speaking of effects photography fluorescent materials, paints inks etc should be mentioned This is a field that has not received much attention due to lighting equipment limitations however it can be accomplished in Technicolor A very simple test was recently made to indicate some of its possibilities Fabrics colored with fluorescent materials were photographed using as an ultraviolet source a Type 170 M R HI arc covered by a 12 inch ultraviolet Corning filter The arc unit was positioned 12 feet away from the illuminated object and the spread obtainable with filter was about 6' feet at this distance The brightness of the fluorescent fabrics was sufficient to give an acceptable Technicolor negative with the camera operating at the normal speed of 24 pictures per second

Routine studio Technicolor photography has long since passed the experimental stage It is now handled with the same efficiency and dispatch as many black and white units The negative is developed at night and the negative reports negative clippings and estimated printer points are delivered to the Technicolor cameraman on the set the following morning Black and white rush prints if ordered are generally delivered the following afternoon and the color rush prints are delivered the following evening

The negative reports and all laboratory contacts are handled for the cameraman through the Technicolor camera department, which also checks the daily log sheets and by these log sheets keeps a very complete record of every production and of every scene photographed on that production The records have proved invaluable not only to the cameraman but on many occasions to the director and others participating in the production This most excellent coordinating agency is extremely valuable

Further production flexibility would be available if a single film capable of being exposed in any ordinary black and white camera could be used for a full color record Technicolor's Research Laboratory has spent many years in the development of a monopack type of film that would fulfill this requirement Progress on the project was reported by Dr Herbert T Kalmus President of Technicolor Motion Picture Corporation to its stockholders in his Annual Report of 1940 as follows

"Your company's research engineers have also been engaged in cooperation with Eastman Kodak Company on a process of photography employing a single negative or monopack instead of the three strips, and on which three emulsions are superimposed on a single support Your company's officers and technicians are frequently asked when Technicolor monopack prints will be available Their current interest in the monopack process is not primarily for release prints because the triple-layer raw film appears inherently to be so expensive that it could hardly compete in cost with Technicolor imbibition prints in the long run

"But your company's officers and engineers do believe that monopack will be developed to be satisfactory for use as originals from which Technicolor imbibition prints can be made Such an original could be exposed through any standard black-and white motion picture camera and should thus have mechanical *and cost* advantages over three-strip negative

"Work on this monopack process for originals has been in progress for several years and has lately reached a point of decided encouragement for certain purposes. At present the monopack research program includes a number of experiments of semi commercial character which are promising for photography where camera size mobility operating speed or other special considerations are of extreme importance The expectation is that it will first be tried in a limited way for the special purposes indicated, to be matched and cut in with the larger part of a picture photographed by the three-strip method It should be borne in mind that Technicolor three strip photography is constantly improving in quality so that imbibition prints from monopack have *not yet overtaken the present quality* of imbibition prints from three-strip"

The expectation outlined in Dr Kalmus report has been largely realized, and since that time monopack has been used in several pictures including *Dive Bomber* and *Captains of the Clouds* where shots from airplane wing tips and other difficult locations were required in the industrial field in military training films and in special effects photography where mobility and high speed are important These uses of monopack are considered as commercial experiments serving the dual purpose of fulfilling a special need of increased flexibility in the field of color photography and of pointing up production requirements which are not easily determined even on the large-scale test basis that characterizes Technicolor's research program

Technicolor does not consider that the quality of prints from the monopack method of photography has reached the level of quality of prints from its three strip process This resides in part not in the absence of progress with monopack research but in the rapid improvement of three-strip Technicolor which, like all phases of Technicolor's process receives emphasis from its research group

The present monopack process, in lati

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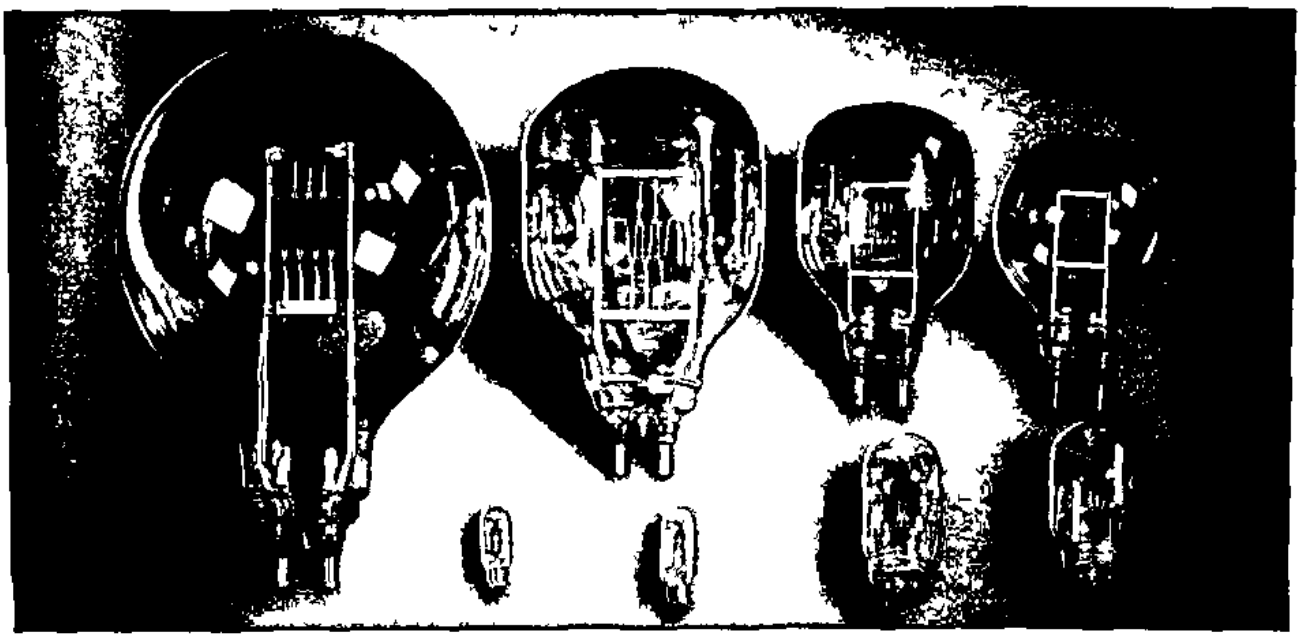
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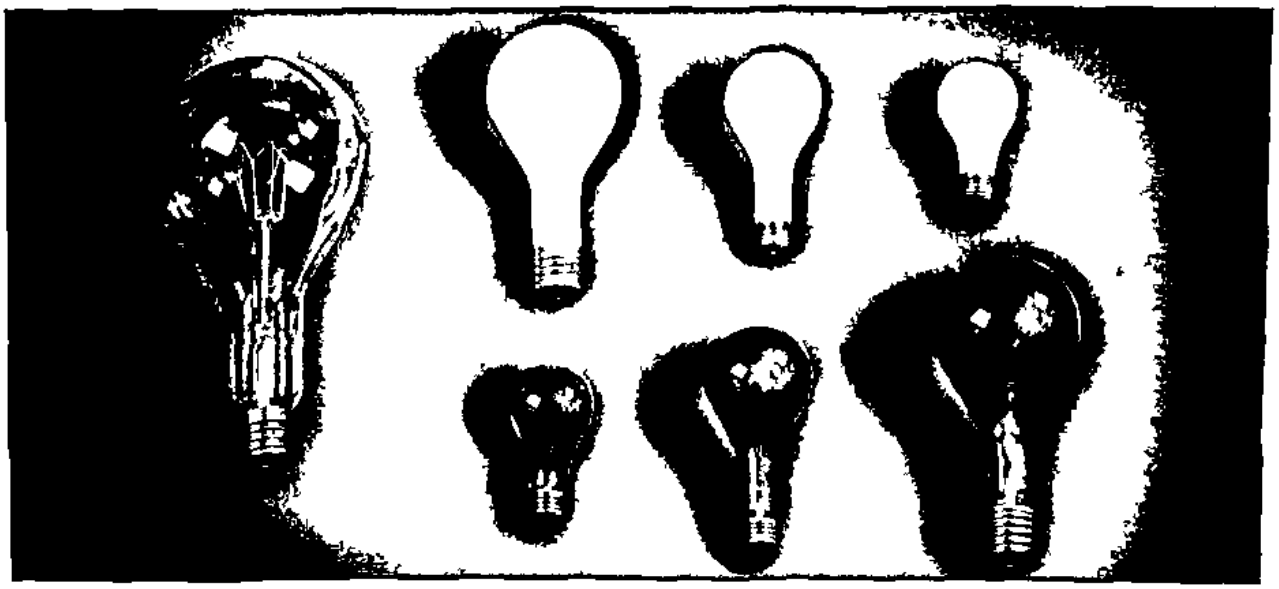
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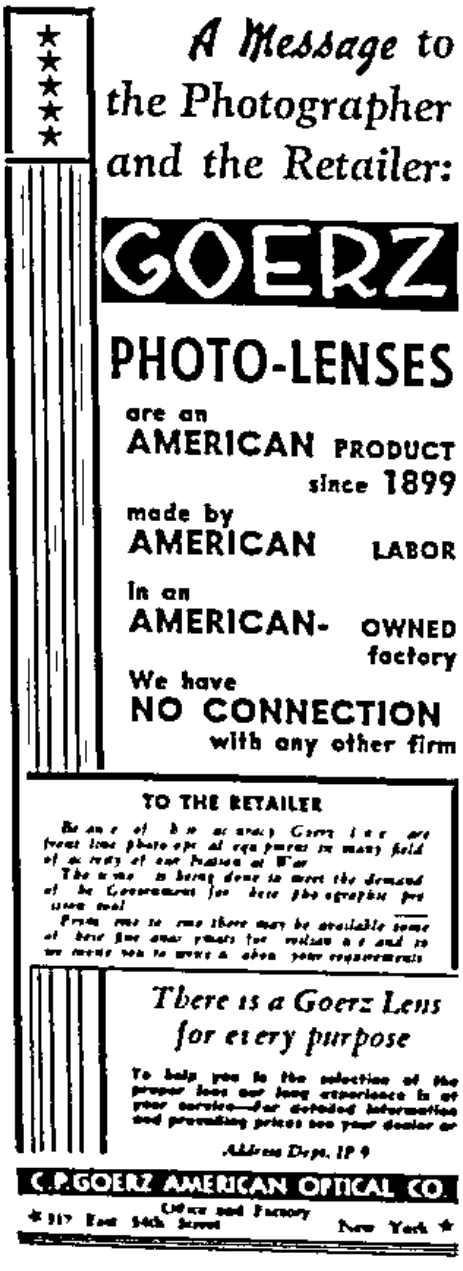
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tude visibility and tone rendition is satisfactory But the picture texture in grain and uniformity has not attained the smooth fine texture of three-strip The problems involved in correcting these deficiencies are receiving attention and progress is being made

Technicolor is now and has been for some time definitely on a routine production basis, with almost all the technics used in black and white available in color also The experimental phases have definitely ng since left the production field and have taken their place in the Technicolor research department which is currently very active and from which the results flow quietly but efficiently to the production field without disturbing changes



Periscopes and Endoscopes

(Concluded from August Issue)

By Frank Arthur Pearson

The Evolution of the Periscope

There have occurred to the reader, no doubt, various improvements that might increase the usefulness of the periscope, and along this line are listed several refinements that were conceived and tested in operation Many of these have proved their worth while others (so-called "blind alleys" in the evolution of the periscope) have been discarded for one reason or another

Line of sight

After the introduction of the erecting prism to obviate the necessity for the observers walking around the instrument as he scanned the horizon it became necessary to provide some means of orientation since he could no longer determine his line of sight from his own position Consequently a 360° scale engraved on a plane plate was set in the image plane of the periscope and an indicator arrow engraved on another plate which by means of cogs was rotated with the upper part of the tube was used to indicate at all times in the field of view of the eyepiece the direction in which the objective was pointed

Built in compass

In order that the compass may be as far as possible from the steel hull of the submarine it is usually placed at the top of the periscope tube which is invariably constructed of a non magnetic material By suitable optical means, an infinitely distant image of the compass scale is projected to the primary focal plane of the eyepiece the image occupying a small segment of the field

Telemeter graticules

In order to facilitate the estimate of the distance of a target the periscope usually contains a graticule which is engraved in degrees or other suitable units This graticule is frequently placed at the upper focal plane of the system and is generally engraved on the surface of a lens already required for the system thus avoiding further loss of light by reflection One of the divisions on the scale for instance may represent an angle of 5 when the periscope is set for 1.5 magnification Thus, if the image of a target subtends one division and if the length of the target is known it is readily possible by means of charts to determine the distance from the target.

Range and Inclination estimator

With the usual rangefinder the images formed by two separated objective systems are brought into coincidence, the amount of rotation of certain thin prisms within the system being used to determine the range of the object In the case of the range-and inclination estimator however the method is to displace certain sections of the image a known amount by means of two thin prisms rotating against each other (so that in 180° the thickness of the prism system is doubled) Thus, for instance, if the height of the stacks of a ship are known previously calibrated scales indicate the distance of the target when the waterline of one image is set atop the funnels of the other image The other purpose of the estimator is the determination of inclination of the target's course and this is accomplished by means of a comparison of the actual length of the target (known from a recognition of the target and from its previously estimated range) with its apparent length, the comparison being effected quickly by means of a calibrated scale on the handle that operates the rotating thin prisms

Roll correcting prism

It is necessary to provide some means of correcting for the roll of the vessel, especially when the higher power system is being used (with a magnification of 6½, the field of view is about 10° so that a roll of ± 5° would cause the target to disappear from view) This is accomplished by means of a prism at the top of the periscope, which is actuated by means of one of the training handles

Sky searching prism

The great advances in the use of aircraft to combat submersibles have made it advisable for a submarine to carry at least one periscope fitted with a sky-searching device This consists merely of a prism within the head which is capable of rotation about a horizontal axis to enable a viewing from about 10° depression to the zenith The sky-searching prism is actuated by rotating one of the training handles

The sky-searching prism may be used also as a roll-correcting prism Indeed the main difference between the two is that the roll-correcting prism enables the line of sight to be angled only through a limited angle usually from 15° depression to 20° elevation

"Blind Alleys" in the Evolution of the Periscope

Of the various refinements that have been tested and discarded the following examples are as interesting as are the reasons for their non use today

"Cleptoscope" (Ground glass periscope)

In order to increase the ease of observation, the idea of having the image project

ed onto a ground glass screen was patented by two Italian naval officers in 1902, and such a periscope was built in 1904 by C. P. Goerz of Germany. The inventors called their instrument the "Cleptoscope" and its advantages were the greater movement possible for the head of the observer and the fact that he could use both eyes simultaneously thereby greatly lessening the eye strain due to the continual use of one eye. The disadvantages were the need for clear weather due to the greater dispersion of the emergent light by the "grain" of the ground glass, and the inability to recognize fine detail or promptly to recognize distant objects because of the same reason.

A variation of the ground glass periscope was the combination eyepiece-ground glass instrument, intended to combine the advantages of both systems. In the earlier arrangements, the eyepiece was placed below the ground glass screen and the two methods required viewing from different eye levels. A more efficient design, shown in Fig. 6, permitted the interchange of one method for the other by means of a rotating total reflection prism, however, the fundamental disadvantage remained that it was necessary to view the image from different distances.

In Fig. 6, one surface of the lens M is ground matte, so that the image projected from the periscope is intercepted by it and then may be viewed slightly magnified, through the lens L as through a magnifying glass. The use of the matte finished collector lens instead of a plane ground glass has the advantage that the image is more uniformly illuminated since rays directed toward the margins of the field are refracted toward the eye of the observer.

Omniscope

Since the idea of viewing the entire horizon without rotating the instrument is intriguing, it is only natural that several attempts have been made to design such a periscope. For instance, an early patent envisioned a number of periscopes included in one tube (of elliptical cross section to reduce water resistance) with the several objectives protruding above the water and the several eyepieces forming a circle around the observer's head. Such an instrument would entail a needless expense, would severely impede the progress of the submarine and would consume altogether too much space in the conning tower.

A modification of the above instrument substituted a single eyepiece for the circle of eyepieces on the assumption that a fairly large image was necessary in only one direction, that a mere indication of movement in any part of the field would be enough to catch the observer's attention so that he could direct the main periscope toward the object. The possibility of attack from the air was not considered at that time (1901) and the upper part of the field was used for the auxiliary images. Apart from the cost of such an instrument, it is not possible to have at the same time enough images for an unbroken view of the horizon together with an image great enough for practical observation.

Ring mirror lens ("Ringspiegellinse")

The goal of viewing the entire horizon at one time is almost completely achieved by choosing a so-called "ring mirror lens" as the entrance system of the periscope. It is possible by a suitable choice of curved surfaces to attain a ring mirror lens that is more or less free of aberration and by using the virtual image thus formed to present to the observer an image of the entire horizon around the margin of the field of view of the eyepiece. In Figure 8 is represented a ring mirror lens for which the spherical aberration is small. The inner surface 2 is the reflecting surface, 1 is a spherical surface, and 3 is a plane surface. The spherical entrance surface 1 reproduces the infinitely distant object point to an image at point 4, located behind it. This image in turn serves as the object for the reflecting surface 2, so that the final virtual image lies at point 5. Consequently, it is necessary to take as generatrix for the ring mirror 2, an eccentrically located ellipse with the two focal points 4 and 5, since only then does point 5 appear sufficiently free of aberration. By choosing a "Ringspiegel" lens of suitable diameter

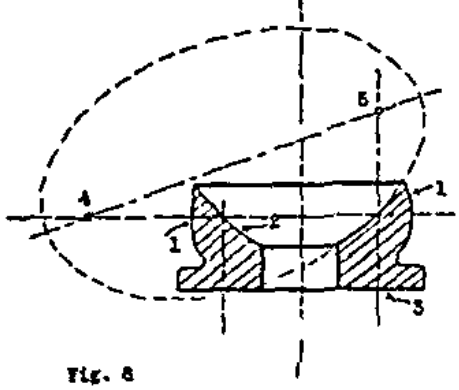


Fig. 8

at a given focal distance, astigmatism may be completely removed.

Since the field of view of the eyepiece however, cannot be easily exceeded (generally from 60° to 65°), if the ring image is large enough for easy viewing, the portion of the field left for the image formed by the regular periscope is too small. In addition, the distortion of such an image makes a quick orientation almost impossible. Thus, ring image periscopes have never come into general use, tempting as the idea first appears.

Binocular periscope

As mentioned before, the use of both eyes simultaneously greatly lessens the fatigue of the observer and at the same time doubles the brightness of the image, since the images reinforce each other. Binocular periscopes, therefore, have been attempted. The increase in diameter of the tube, however has precluded their use except in the case of shorter periscopes. Further disadvantages are the greater cost and the necessity for a method of adjusting the interpupillary separation of the two eyepieces while maintaining parallelism between the two ocular axes.

Binocular eyepieces

If instead of the above method, a single objective system furnishes an image that is split by means of two rhombic prisms so that half the rays are presented to one eye and half to the other, the ease of observation is increased. Since, however, only half the brightness of the image is effective for each eye, the total brightness is not increased. A further disadvantage occurs because diffraction at the edges of the separation surface impairs the definition of the image.

THE ENDOSCOPE

As mentioned in connection with the simplest periscope containing lenses, the cystoscope of Nitze (1876) comprised three or four simple lenses in an optical system similar to that shown in Fig. 2 above. The exit pupil of the instrument was only 1 mm in diameter, so that the image was not very bright and the quality of the image was as poor as might be expected in an uncorrected system.

Later cystoscopes built by Louis and H. Lowenstein embodied an optical system similar to that shown in Fig. 3. This firm also made a cystoscope with a "stereoscopic eyepiece and while Gleichen ("Modern Optical Instruments") shows a

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drawing of the rhombic prisms which effect a separation of the images it is not clear whether one or two objectives are used If there is one objective then the term stereoscopic does not apply If on the other hand there are two objectives more information should be given concerning their separation whether they are movable et cetera

In one cystoscopes a complete inversion of the image is effected through the use of a roof (Amici) prism In the cystoscope Wappler a silvered hemispheric surface is used in place of the entrance reflector prism The cystoscope made by the Genito Urinary Company of England is 4 6 mm in diameter 260 mm in length The magnification various from 1 8 to 2 3 and the diameter of the field in air is 26 mm at the standard focal distances of 25 mm

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Barr and Stroud Ltd Glasgow Scotland THE SUBMARINE PERISCOPE (Catalog) Pamphlet No 291

Gleichen A MODERN OPTICAL INSTRUMENTS

ENCYCLOPAEDIA BRITANNICA, 9th and 14th Editions

Without undertaking to provide foot notes I have quoted more or less freely from Dr Weidert s lecture and in one or two instances from the Barr and Stroud catalog The figures were all taken from the former reference

Correction

In our August issue page 12 two lower right hand pictures were indicated as being Margy Hart This was incorrect These two photographs are of Ann Corio from Sig Newfeld s production Jungle Siren Producers Releasing Corporation We apologize to all concerned

In Memorium

Milton Bridenbecker

Member Local No 659

834th Signal Photographic Detachment Becomes Affiliated Unit of Army

Colonel Darryl F Zanuck announced that the War Department has authorized the affiliation of the 834th Signal Photographic Detachment and has assigned this Signal Corps unit to the Special Services Branch of the Army

Lieut Colonel Frank Capra has been named Commanding Officer of this Detachment to be composed mainly of ace motion picture industry directors writers and technicians for the purpose of producing a series of educational and Training Films exclusively for the use of our armed forces.

Colonel Zanuck revealed that the 834th Signal Photographic Detachment will be stationed at the Fox Western Avenue Studio which has been leased by the 20th Century Fox Film Corporation to the War Department for the duration at the rate of $1 00 per year

This new Signal Corps Detachment will be an Affiliated Unit sponsored by the Research Council of the Academy of Motion Picture Arts and Sciences which is also charged by the War Department with securing the personnel for a number of Signal Photographic Companies which will operate on motion picture and still picture photographic missions throughout the world





Irene Manning of Warner Bros as seen in the camera of that genius of the unusual Bert Biddy Lonsworth

16mm. department

By Hamilton Riddel

Amateurs Film "Peer Gynt"

How a group of ambitious cine film amateurs undertook and completed the translation of Henrik Ibsen's "Peer Gynt" into a 16mm production stressing the mood and music of Edvard Grieg's great compositions forms a story of interest to home movie enthusiasts.

Young David Bradley of Winnetka Illinois as producer of "Peer Gynt" banded together a cast of more than one hundred non professional actors and with no Hollywood inhibitions to hinder him undertook the filming of the famous story of the Scandinavian hero whose exploits form such a colorful chapter in Norwegian folk lore. As Bradley points out, Peer Gynt is a tremendous play consisting of five acts and forty nine scenes which if it were presented on the stage would require about ten hours to cover the action. The professional screen has never attempted it. Thus Bradley's amateur troupe has indeed scored an innovation in the field of 16mm movies.



Reading down: Dance of the trolls scene from Norwegian wedding festival where Peer Gynt meets Solveig entering the hall of the Mountain King. Charles Heston portrays the role of Peer Gynt.

The film runs about 2600 feet providing a presentation of slightly less than two hours and was entirely photographed on 16mm reversal stock. Two cameras were employed one equipped with a "windjack" device so that lap-dissolves could be obtained. With over three hundred camera set ups the production was so well undertaken that only four retakes were necessary during the 3 month shooting schedule. Location spots included the wooded glens of Winnetka the shores of Lake Michigan and the scenic wonders of The Dells in Northern Wisconsin whose countryside is so reminiscent of Norway. The character of Peer Gynt a demi god with human failings and weaknesses was portrayed by Charlton Heston whose handling of the stellar role was carefully accomplished. Other members of the cast turned in creditable performances.

Bradley now in Hollywood points out that his undertaking of Peer Gynt was prompted by a desire to fully employ Ibsen's saga because of its pictorial possibilities and to blend them with Grieg's familiar music. The film is definitely keyed to the mood of the musical passages. Although all but a few scenes have musical accompaniment, there being a short sequence in synchronized dialogue the filming of the dance shots was accomplished in novel manner. An ordinary portable phonograph provided the "orchestra." With careful timing and rehearsal the dance scenes were cued to the music of the machine. Upon the screen the timing of these scenes appears particularly accurate.

Dolly shots adding interest to the picture were made in a very unconventional manner. With a few wooden planks to form a smooth track a child's coaster wagon provided the required trucking shots. These scenes were decidedly smooth in the completed production. A variation of this type of moving shot was made when the script called for Peer Gynt mounted on a horse to pull away from a close camera set up. Actually Peer was astride the top of an ordinary modern motor car. At the proper moment the car's clutch was released quickly giving a realistic jerk simulating the motion of a horse as it starts into a gallop.

Nor did Bradley overlook unusual bits of technique. Especially noteworthy is



Reading down: Portable phonograph furnishes music for dance scenes. Producer David Bradley at camera and associate producer Roy Eggert Jr.; dolly shot is obtained with child's coaster wagon.

the scene In the village wedding sequence Two older townfolk are discussing Peer in none too complimentary manner one expressing the hope that the village belle Solveig should never come to know Peer Gynt. The two men frame the medium shot in the foreground while between them the camera picks up the background which discloses Peer in the act of meeting the heroine Rather a neat introduction to this particular sequence in the picture

In filming "Peer Gynt," Bradley has made judicious use of 16mm stock shots, carefully cut and timed and interspersed into the action of his screen play This is a bit of technique that many cine filmers can use to good advantage and to add a different touch to their personally produced movies. The stock shots were especially useful in establishing locale, as the "Peer Gynt script called for settings of Norway, Morocco the North Sea and desert lands

Possibly the high spot of Peer Gynt" is the handling of the closing sequence Discarding the usual Hollywood close-up of hero and heroine, Bradley chose long shots Peer, now an old man, is seen returning to his home in Norway and to Solveig As he walks away from the camera, there is no attempt to intersperse close-ups The film ends on Peer's reunion with Solveig (still done in long shot), the two characters appearing dwarfed by the majesty of the extreme long shot photography of the picturesque countryside The closing is simplicity itself but it is most effective

PATENTS

By ROBERT W. FULWIDER, *Patent Attorney, Los Angeles*

No 2,288 928—High Speed Film Movement Mechanism July 7 1942 *George H Worrall* Los Angeles Calif., assignors to Mitchell Camera Corporation West Hollywood Calif 3 claims (Cl 88-18 4)

Improved claw pin path and increased pull down speed in two-armed type of intermittent film movement, as applied to Mitchell camera patents, 1 648,559 and 1 930 723

No 2,289 521—Stereoscopic Motion Picture Viewing Device. July 14 1942 *Conrad F Rose* Denver Colo 4 claims (Cl 88-16 6.)

A miniature motion picture projector mounted between the lenses of a sterescope whose picture supporting arm carries the projection screen

No 2,289 712—Process for the Manufacture of Polarizing Materials. July 14, 1942. *Edwin H Land* Wellesley Farms, and *Cutler D West* Cambridge Mass assignors to Polaroid Corporation Dover Del 8 claims (Cl 260-284)

Relates to the production of herapathite in the form of minute needle-shaped crystals

No 2,289 713—Light Polarizer and Process of Manufacture. July 14 1942 *Edwin H Land* Boston Mass., assignor to Polaroid Corporation Dover Del 6 claims (Cl 88-65)

A light polarizing sheet formed by suspending the needle-shaped herapathite crystals produced by Patent No 2 289 712 in a clear plastic spreading the plastic upon a transparent support, and successively stroking the coating under high pressure in a single direction to arrange the crystals in parallel alignment

No 2,289 714—Light Polarizing Image in Full Color. July 14 1942. *Edwin H Land* Boston Mass., assignor to Polaroid Corporation Dover Del 32 claims (Cl 88-16 4)

Projection apparatus casting upon a non depolarizing viewing screen a pair of superimposed light polarizing stereoscopic images in full color obtained through utilizing the plastic material described in Patent No 2,289 713 the dichroic axes of the components of the superposed images being at right angles and a viewing device comprising spectacle frames with colorless light polarizing filters mounted in the eye-apertures, the axes of said filters being crossed.

No 2,289 715—Composite Film for Receiving Stereoscopic Prints. July 14 1942. *Edwin H Land Boston, Mass* assignor to Polaroid Corporation, Dover Del 6 claims (Cl. 88-29)

Film comprises bonded layers of polyvinyl alcohol the molecules of one layer being oriented at right angles to the direction of the molecules of the other layer the opposite surfaces of the film having the property of absorbing and molecularly orienting dichroic dyes and stains used in the production of light polarizing images.

No 2,289 738—Color Correction July 14, 1942. *Merrill W Seymour* Rochester N Y., assignor to Eastman Kodak Company Rochester N Y 9 claims (Cl 95-2.)

In reproduction of multicolor originals a method of making corrected color separa

No 2,290 032—Nonrewind Expansible Film Reel. July 14 1942 *Barney Wendel* Boston Mass., assignor to No Rewind Reel Corp Boston Mass 5 claims (Cl 88-18.7)

A film reel having a cylindrical ring upon which the film is wound formed with an outwardly displaceable section and means for exerting inward radial pressure upon the film.

No. 2,290,223—Color Picture. July 21 1942 *William C H Finch* Newton Coun 5 claims. (Cl 95-2.)

Comprises a plurality of translucent superimposed layers of different colors, each having a similar record of contiguous correspondingly parallel strips continuously varying in tone the parallel strips in each layer being staggered transversely with respect to the strips in each of the other layers in the completed picture

No 2,290,276—Motion Picture Projector. July 21 1942 *Herman A de Vry* and *Otto R Nemeth* Chicago Ill., assignors to De Vry Corp., Chicago, Ill 4 claims (Cl. 88-17)

A multi way switch controlling the circuits supplying the projector motor and lamp, a rotatably adjustable control member to operate the switch including a cam arranged to actuate clutch on the motor shaft, the cam being formed to determine the position of the clutch for each adjustment of the control member in accordance with the corresponding circuit connections for the lamp and motor through the switch

No 2,290 918—Drive for Film Printers July 28, 1942. *Erwin Taenzer, Brooklyn, N Y.*, assignor to Warner Brothers Pictures Inc 8 claims (Cl 95-75)

A printer designed to compensate for different degrees of shrinkage of the film in contact past an exposing light. The negative film is maintained in a definite curved path while the curvature of the positive raw stock is varied in accordance with the variations in length between the films.

No 2,290 919—Film Printer Drive. July 28, 1942 *Erwin Taenzer* Brooklyn and *Frederick W Roberts*, Rosedale N Y., assignors to Warner Brothers Pictures, Inc 9 claims (Cl 95-75)

Substantially similar to Patent No 2,290 918 together with means to guide transversely the film loop approaching the point of exposure

TRADEWINDS

Agfa Ansco Liquid X-ray Film Processing Chemicals

Agfa Ansco Liquadol and Liquafix are entirely new type, improved liquid processing agents for all types of X ray films

Liquadol

Liquadol gives excellent contrast, clarity, detail, and a high peak density, in addition to coming in a convenient concentrated form that has good keeping qualities

One of the outstanding advantages of a liquid developer is that it require neither the time-consuming weighing nor dissolving of chemicals With Liquadol, this otherwise bothersome procedure has been simplified so that all that is necessary to make the stock Liquadol ready for use is to pour the bottle content into a clean developing tank and add water Other advantages include a rapid developing time and extremely long life Normally exposed radiographs on high speed films can be developed in three minutes at 68° F in a fresh solution and non screen type films in four minutes Directions for developing replenishing and recommended agitation methods, are fully described in the instruction sheet which accompanies each bottle of Liquadol Developing times at various temperatures are also given below

Time Temperature Developing Chart for Liquadol

High Speed X Ray Film		Non Screen X Ray Film
1¾ min	75° F	2¾ min
2½ min	70° F	3½ min
3 min	68° F	4 min
3½ min	65° F	4½ min
4½ min	63° F	5½ min
5½ min	60° F	6½ min

When used with these comparatively short developing times Liquadol will develop at least 50 per cent more films of average exposure than will other types of powdered X ray developers commonly used in the past The exact number of films that can be processed in a given quantity of developer will depend of course upon exposure to air the temperature of the developer and the amount of exposed silver to be developed

Liquafix

Liquafix also comes in a concentrated form in two convenient sizes When diluted to proper strength the stock solution is converted into a working solution several times its former volume Thus a one quart bottle will make one gallon of ready to use fixer while a five-quart size will make five gallons

This improved fixer for all X ray films contains a fast acting fixing agent that will reduce the clearing time to a minimum In addition to this, Liquafix will also process approximately 30 per cent more films of average density than other formulas commonly used in the past For instance fresh Agfa Ansco Liquafix will clear films completely in one minute About 26 radiographs 14 x17", can be processed in each gallon of solution before increasing clearing time will be required. However, to insure complete fixation and permanence films should be left in solution for twice the clearing time, then washed thoroughly to remove all fixing chemicals

Helpful Suggestions

Here are few facts which X ray laboratory technicians should find useful

1 Tests have shown that it is more economical to remove films from the developer quite rapidly, transferring immediately to the rinse bath, without allowing developer on the film surface to drain into the tank. Despite seeming waste of developer, this procedure is really economical because solution on the surface of the film rapidly oxidizes and contaminates the remaining solution

2 The factor of agitation in development is also an important consideration if optimum radiographs are desired Agitation immediately upon immersion dislodges any air bubbles adhering to the surface of the film, and constant agitation (for example, two seconds out of every minute) helps to obtain uniforms results

3 Many so called 5 gallon tanks actually hold 5½ gallons or more It is important to determine the exact capacity so that the developing solution will be mixed to proper strength

New Agfa Ansco Toner Available

A new product, Liquid Flemish Toner, of the concentrated Selenium type, has been announced by Agfa Ansco to take the place of Agfa Ansco Flemish Toner The two main advantages of the new liquid toner over the present Flemmish Toner in powder form are shorter toning times and better exhaustion characteristics as shown in the following table

Minimum Toning Times

TONER—Agfa Ansco Liquid Flemmish Toner 1 3

FRESH SOLUTION

SL. TONE	FULL TONE
10 sec	15 30 sec

No 8x10" CYNON PRINTS/LITER

25	50	100	105
1 min	1 min 25 sec	3 min	3 min, 25 sec

TONER—Former Flemish Toner

FRESH SOLUTION

SL. TONE	FULL TONE
6 min	12 15 min

No 8x10" CYKOON PRINTS/LITER

50—18 min

One of the main reasons for the exhaustion of any photographic toner is the loss of solution carried off by the prints This physical loss is the same with a concentrated solution as with a dilute solution, which indicates decreasing waste of concentrated stock solution with increasing dilution Therefore, it is another distinct advantage of the new product that besides its normal dilution of 1 to 3 parts of water, it can also be used in higher dilutions up to 1 7 The initial toning time will then be approximately one minute, and about 100 8x10" prints can be toned before the toning time reaches four minutes

Photographers who occasionally mix a small amount of toner to tone a few prints and to whom the prolonged four minute toning time is of no concern can thus effect a considerable saving by using the 1 7 dilution An added convenience is that to be made ready for use, the new toner needs only to be diluted with water

The Navy Needs Binoculars!

The Navy's appeal for binoculars has brought disappointing results Recently the Navy stated that only 6 000 offers had been made, of which only 1,675 were acceptable types In World War I, 51,217 glasses of all types were offered and 31, 000 accepted, all but one of which were returned to their owners after the war The desired types are confined to Bausch & Lomb and Zeiss 6X 30 and 7X 50 models because facilities are available to keep them in repair

Many sportsmen are believed to own one or the other of these models No doubt many are buying war bonds in preference to turning in binoculars in the belief that the government can thus acquire the necessary glasses

This is a mistaken idea according to John F Brandt of the Bausch & Lomb Optical Company It is not a matter of money but of skilled personnel, he explained We are making as many binoculars in one month now as we formerly made in a year but our facilities and workmen must be allotted to many other military instruments in equal demand We have aided other manufacturers to get into production on these models but the demand is much greater than immediate supply Right now the sale of civilian binoculars to the Navy will save lives and ships"

In promotion of the tin salvage drive the statement has been made that tin is necessary in the production of binoculars Brandt said that 'some twelve different metals are used in the alloys for prism binoculars chief of which are aluminum and brass but the amount of tin used in a single 7X 50 binocular is only seven hundredths of an ounce This small percentage of tin however, is very necessary to the correct performance of the metal parts

They Say···

By RELLA

● A E (Buddy) Williams a chief petty officer in the U S Navy

● Fred Carney who used to be at Technicolor now is a first lieutenant in the Army Air Force

● Howard Schwartz of RKO is a sergeant in the U S Marines

● Al Kingute so well known as Alan Baldwin because of his Thespian activities enlisted in the Bureau of Aeronautics His younger brother joined him

● Visitor in Iowa was Vincent Farrar CPO who brings regards from Kenneth Peach at San Diego

● Joe Valentine Bill Dodds Phil Lathrop and Ed Estabrook have been at Santa Rosa for Universal, while for the same company somewhere in Canada are Harry Perry, Len Powers and Bert Eason

● H C. Ramsey, Mickey Whalen Clifford Shirpser and Eugene Borghi now in the Army Air Force as first lieutenants

● Earl Colgrove of Walt Disney has enlisted in the Navy and commissioned a lieutenant senior grade

● Ray Bloss of Leon Schlesinger has enlisted in the Marines

● Skippy Burgess, who is now stationed at Florida greeted the boys on "Air Force at Tanya"

● Jack McKenzie, Jr., of the U S Navy, whose remarkable feat at Midway is history in town greeting friends

● Maynard Rugg of 20th Century Fox has enlisted in the Bureau of Aeronautics

● John Eckert of RKO has moved on to Wright Field Dayton, Ohio, to be commissioned in the Army Air Force

● Fred Detmers now in the U S Army

● Richard Johnson who used to be at Walt Disney in the U S Army Signal Corps.

● Andy McIntyre of MGM on his way to Officers' Training School in Miami Florida.

● Guy Wilky's son soon will be a graduate of the famous school for midshipmen at Annapolis.

● Andy Anderson, Ernest Smith, James Barlotti Edgar Lyons, Kit Carson and Monte Steadman all working for Disney shooting training shorts

● Whitey Schafer in charge of the still photographic work at Paramount Studios and doing a fine job

● William V Skall of Technicolor departed from Los Angeles after enlisting in the Army Air Force where he has been commissioned to the rank of captaincy In the last World War Skall was a captain in the Canadian Air Forces and later transferred to the U S Air Forces Following that he flew the mails subsequently entering the picture business. He has made a fine record for himself as cameraman during the last eight years.

● Sam Greenwald newsreeler par excellence felt the call of the Army and enlisted in the Air Forces where he also was commissioned a captain He leaves for Florida shortly to enter training school.



Captain William Clothier U S Army Air Corps. By Ernest Bachrach

CLASSIFIED

FOR SALE BY PRIVATE PARTY—One second hand Moviola complete sound and picture head One new Photronic Cell Densitometer completely automatic, same model as used by leading laboratories in Los Angeles. One Duplex Printer, complete Al Goldberg — 6373 Delongpre Avenue, between 9 a.m. and 5 p.m

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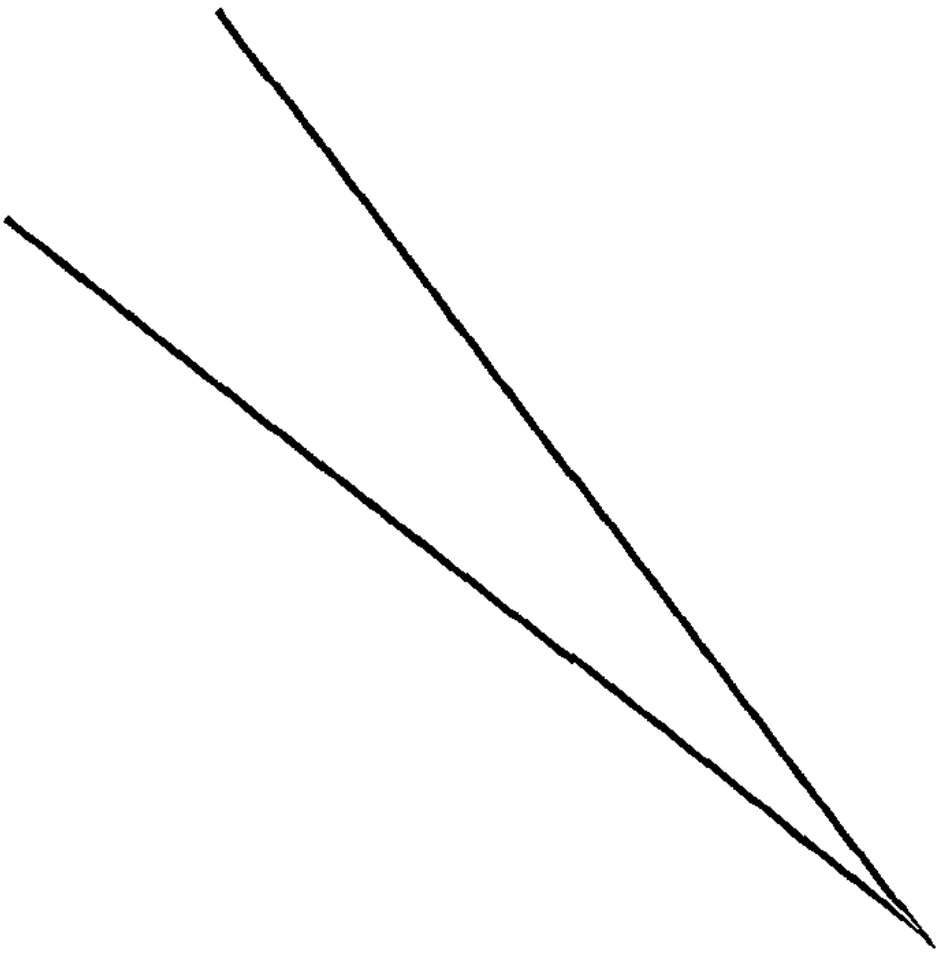
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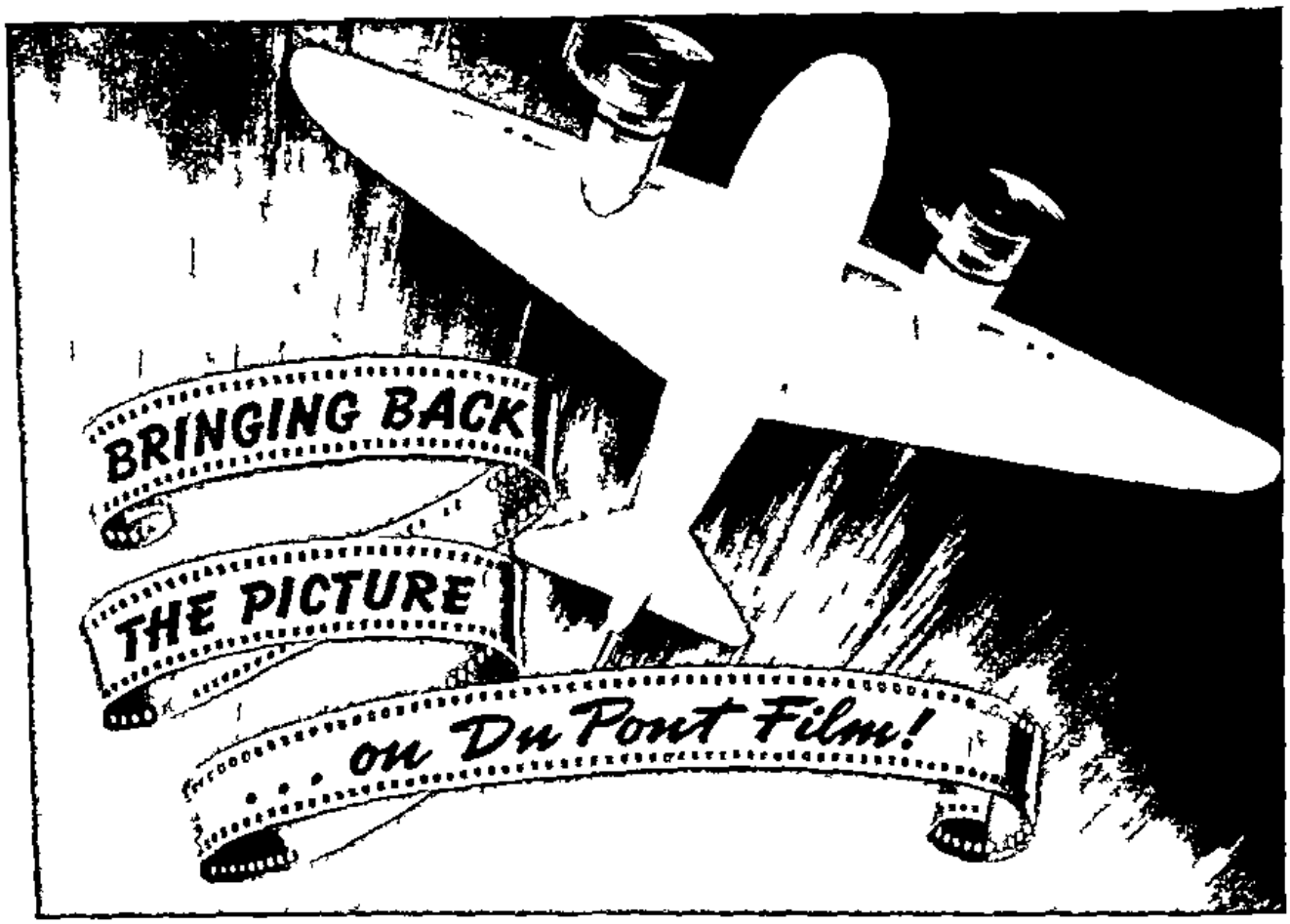
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October, 1942

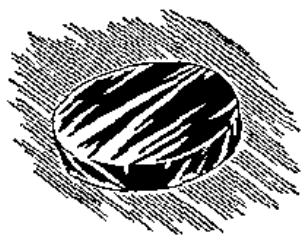
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INTERNATIONAL photographer

Vol. XIV October, 1942 No. 9

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ON THE COVER

The still of Errol Flynn and Ann Sheridan, stars of Warner Bros.' "Age of Darkness," was shot exclusively for *International Photographer* by Bert Six

Editor, HERBERT ALLER

Business Manager, HELEN BOYCE *Art Editor*, JOHN CORYDON HILL.

Contributing Editors GEORGE HURRELL, BERT LONGWORTH, ROMAN FREULICH, ERNEST BACHRACH, ROBERT W FULWIDER, FRED GATELY, GEORGE SCHEIBE

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INTERNATIONAL PHOTOGRAPHER, as the monthly official publication of International Photographers, Local 659, of the International Alliance of Theatrical Stage Employees and Moving Picture Machine Operators of the United States and Canada, not only represents the entire personnel of photographers engaged in professional production of motion pictures in the United States and Canada, but also serves technicians in the studios and theatres, who are members of the International Alliance, as well as executives and creative artists of the production community and executives and engineers of the manufacturing organizations serving the motion picture industry INTERNATIONAL PHOTOGRAPHER assumes no responsibility for the return of unsolicited manuscripts or material

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"Can you imagine that guy"

By William Mortensen

A lab on wheels

By David Wood

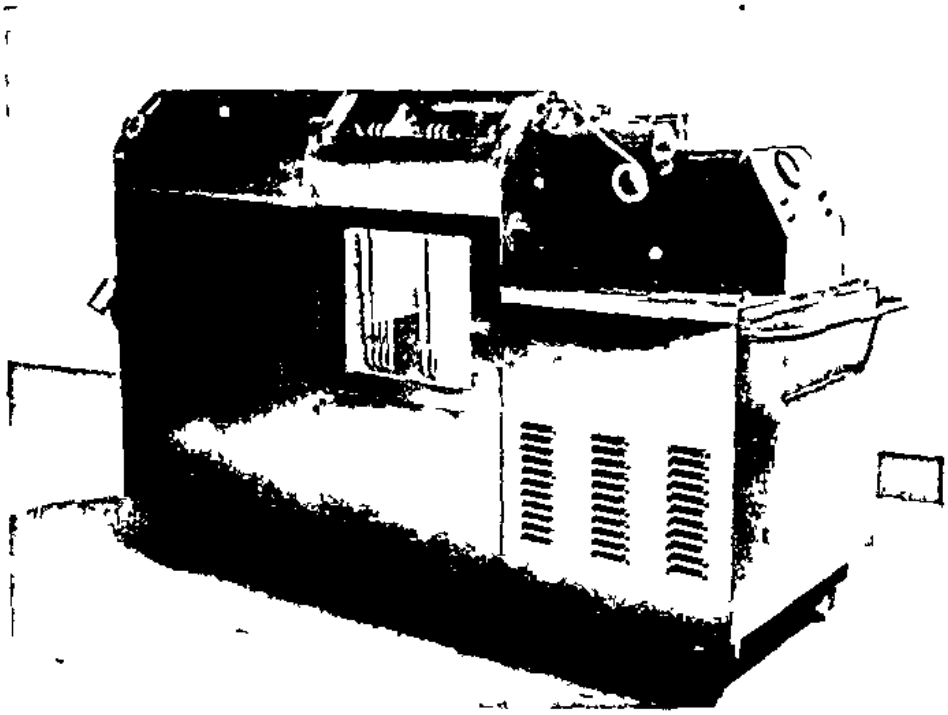
It wasn t so many years ago, compara tively speaking that we were thrilled by that well known slogan of a well known manufacturer—' You pust the button, we do the rest After taking the pictures in our little hand cameras we'd wrap the film carefully in the little box in which it had been received and send it to the manufacturer, waiting anywhere from five days to two weeks before we again had the thrill of seeing the finished pictures Then came ' pictures that moved with all the improvements in cameras and film that we would expect in the development of anything that plays so important a part in our lives as the motion picture

Then not so long ago came the necessity for motion pictures for military purposes —and the further necessity of getting them quickly All progress in every endeavor is increased many fold by the exigency of war and there is no difference in the subject of photography, particularly that which is of great benefit to our armed forces

There is no intention to go into the history of photography, but for the few who may not be familiar with the Re versal Process, a few words of explana tion may be in order

In ordinary photography, a film is ex posed in a camera developed fixed washed, dried and then a print is made therefrom In the reversal process no print is necessary, as the original film under goes a series of chemical changes which cause the film to become a positive through reversal Procedure starts as in ordinary photography by the development of a nega tive image After development the film passes to a solution which stops the action of the developer The film then passes a printing light which exposes the previously unexposed silver bromide emulsion The film then goes into a solution which bleaches the negative image The next solution is a clearing bath which causes the negative image to be transparent After the clearing bath the film again is printed to insure that all remaining silver bromide be thoroughly exposed This is now an undeveloped image as the negative image has been removed The film is then passed to a second developing solution which de velops all the remaining silver bromide and the result is a positive image

The H W Houston Company of Holly wood is turning out a complete 16 mm reversal process laboratory and it is con densed into such a small space that it may be loaded on a truck and moved



This complete developing machine is only 30 inches wide, 54 inches high and 70 inches long—small enough to load on almost any truck, and it is mounted on wheels so it easily may be moved

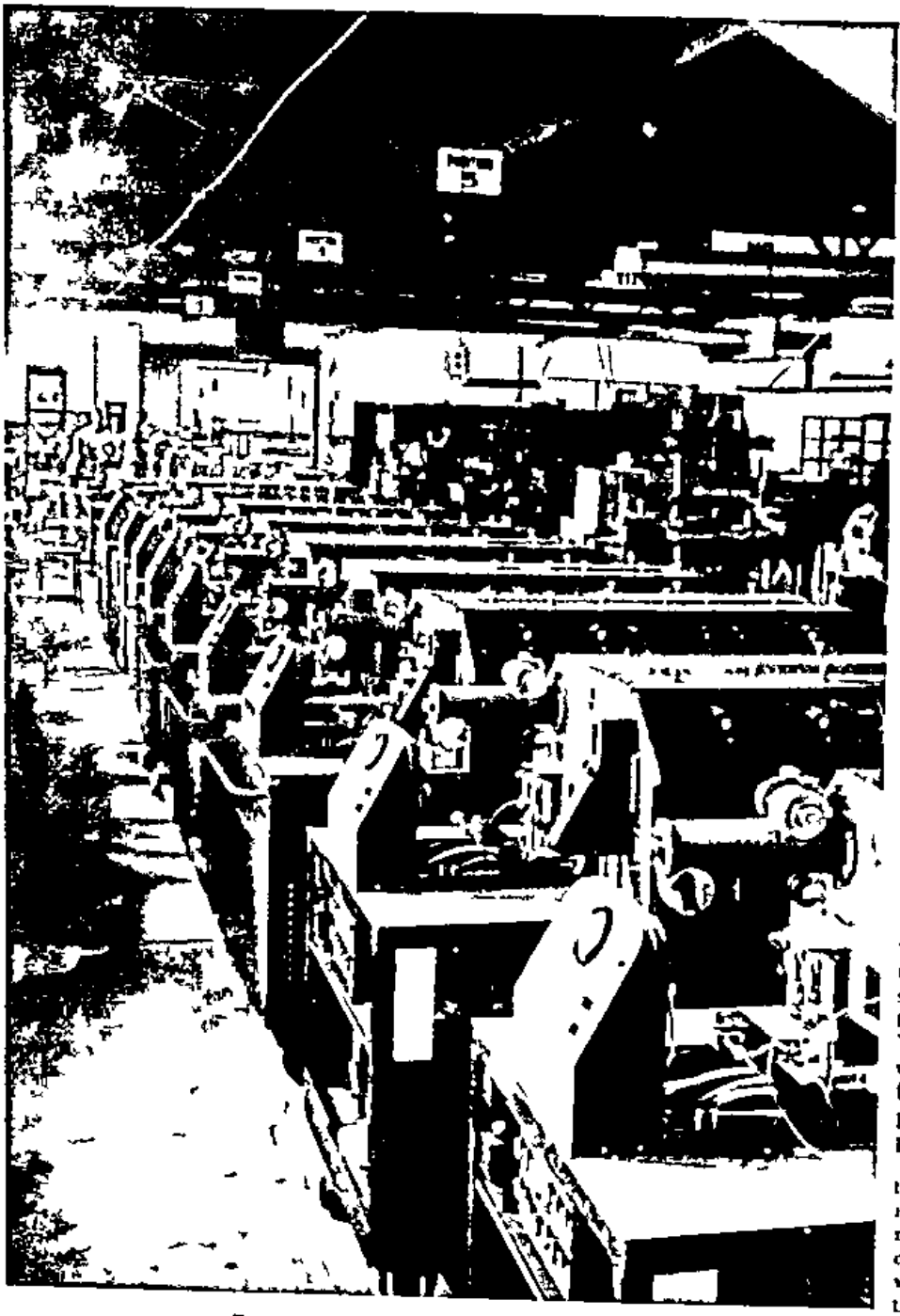
anywhere, or it may be moved around to any location where it is necessary to use it as the machine is mounted on wheels Its only 30 inches wide 54 inches high and 70 inches lon and the speed with which this small lab will turn out the finished positive ready for projection is hard to believe In less than 30 minutes from the time a reel of film is exposed and the picture recorded it can be shown in the projection room

It doesn t make any difference whether the film is being shot in the tropics or on the arctic circle the control of the tem perature of all of the baths and conse quently the film itself is all handled by this small machine for it has a refrigera ting unit and a heating unit embodied with in itself which automatically keep every bit of the process at exactly the right temperature All anyone has to know is the different operating controls in order to produce very excellent black and white positive film If one follows the simple directions for the operation of the machine the machine itself will take care of all the hard work Once the reel is fed into the machine the entire developing process and the production of the satisfactory black and white film is assured

First the film goes into a tank in which there is no liquid The tank is dry and in it is an ingenious mechanism with an in dicating elevator which functions perfectly when film changes are made and allows film to continue traveling while a splice is effected Then the film goes into a second tank where again the tension on the film is *controlled* and the first *development* takes place Then it goes into a third tank in which is a stop bath From there it goes to a fourth tank and this is the bleach then on into the fifth tank which is the clearing bath then into the sixth tank and that s the second developer in connection with the reversal film then into the sev enth tank a stop bath From there it goes into the eighth tank which is the hypo or fixing bath the ninth tank is the wash water and in the tenth tank the film is sub jected to a proper glycerine rinse

All you need to operate this entire mech anism are three connections one electrical one cold water and three drains During operation of the machine however and at all other times only one drain need be connected Out of the machine comes the completely finished film dried and wound on a reel for immediate introduc tion into the projector

There is along the line of operation



Deve.op ng machines in mass produc on

three cleverly conceived electric light oper ations which have a great deal to do with the success or failure of producing satis factory film One of these operates on the negative emulsion one on the positive emulsion when the negative emulsion has been removed and lastly the well known photo electric cell is so cleverly applied that it measures the exact footage of film that is finished it stops measuring when certa n footage passes in front of it—and it will stop the whole machine if there isn t any film going through it

This isn t the only place that the film is stopped automatically It the man in charge of the machine isn t paying too close attention and the reel from which the sensitized film enters the machine is nearing its end a buzzer signal warns of that fact and if it is still neglected and all of the film has passed from the reel another device rings a bell and stops the whole operation That s just one indica tion of how nearly fool proof the H W Houston Company has made this process ing machine The two l ghts just men tioned do a very sat sfactory job of taking care of under-exposed or over-exposed parts of any film by working first on the negative emul ion and then on the posi tive emul.ion the first one furni hing an automatic mask for the second one and that which is handled by the second one be cause of its particular funct on, forms an automat c mask for the first one so that when the final positive film is developed fixed and washed a general uniformity is produced which takes care of most of the errors of under or over-exposure The d uble counteracting effects of these two lamps printing lamps if you wish, is a masterful indication of clear thinking and the application of that th nking to a prac tical purpose

In the handling of any film the ques tion of moisture, either in the f lm itself, the emulsion or coagulated upon the sur face of the film is always a prol lem, but th is machine takes care of that. The dry ing process is so cleverly conceived that on the finished product there is practically no chance of streaks, emulsion spots or any of the other moisture annoyances

The whole process is entirely continuous If the exposed film is fed into the machine at the front end on the right hand side the c mpleted product will come out on the left hand side

There is one other fact that should be interesting particularly to one who is not a professional in the developing field when the machine has to be operated at some remote location All of the chemicals nec essary to make up the solutions for each tank, wherever a tank should have a solu tion in it are packed in a carton within which are the necessary packages of chem icals to be used in the tank all accurately weighed and numbered in the order in which they should be dissolved in clear water For example if five different chem icals go into Tank No 2, all that is neces sary is t dissolve the contents of the con tainers found within the package for Tank No. 2 in clear water in the exact order in wh ch they are numbered Not much chance for a mistake there The Houston Com pany has tried to make it as simple as possible for the operator

There is one other th ng and that is the changing of reels of the finished film is exactly the same as the changing of reels of the sensitized film and it can be done while the machine is still running w thout interference with the operation of the machine It keeps right on feed ng finished film through the machine and when spl cing the mechanism which controls the speed at which the roll of finished film re volves, automatically takes up the slack, still maintaining the same tension and the machine goes on performing its functions while the finished reel takes up the film to a point where the tension is exactly the same as it was before any change was made

In the case of almost all improvements we are prone to start at the beginning of an operation and work down to its last stage but the H W Houston Company began at the last stage and looked up until they had reached the point at which the downcoming improvements joined with those that were working up It isn t a bad idea to look up anyway!



1 Demonstrating what she means by "Star Spangled Rhythm" Dona Drake takes Gil Lamb for a sp n on the dance floor



2 Beautiful eves of Dona attract Gil a lot more than does the dancing



3 The little lady goes up in the world when Gil tries one of those jitterbug stunts he s seen



4 Now you catch me Gil tells the astonished Dona as he flips himself into a sitting position in the air

With Hyman Fink

Staff Photographer
Photoplay Movie Mirror
and Radio Mirror



Fred Astaire Ilona Massey and Hugh Herbert (with his trusted radio) leave on bond selling tour



Mary K. Dodson and Cesar Romero at "The Ice Follies."

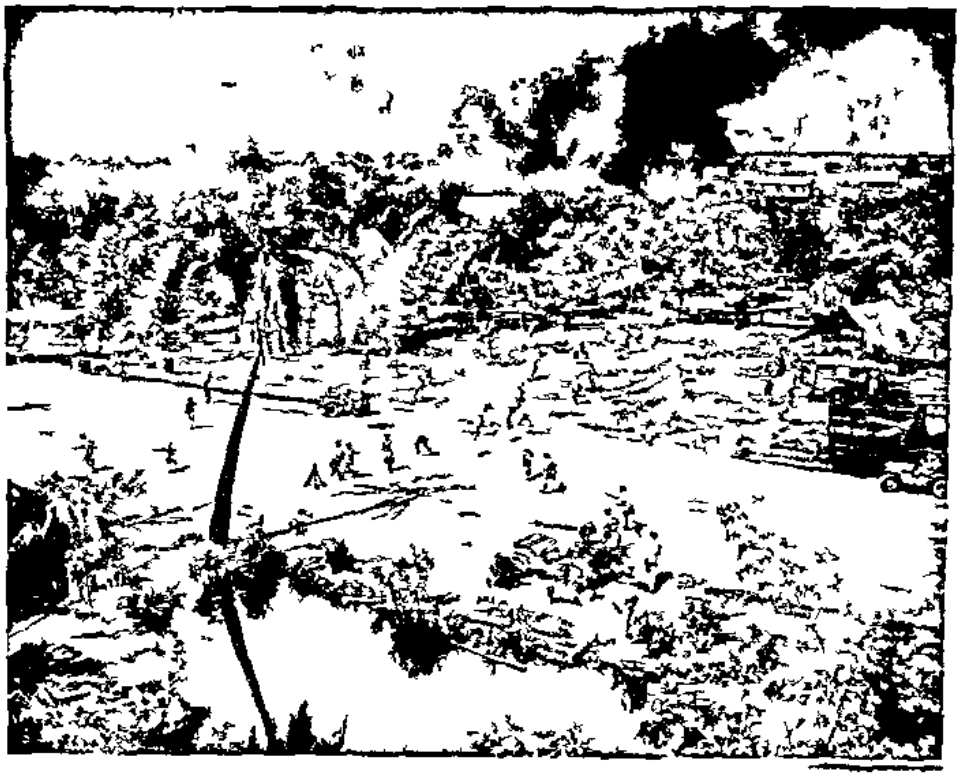


Monty Wooley and Bette Davis at the Mocambo.

cameras on the surface gave a very real s tic effect Oftentimes we had two barges because of the number of cameras in use

It was this picture that gave me my first opportunity to work in the air photo graphing miniatures from a plane which is very interesting with a high speed cam era from low altitudes giving the effect of a torpedo bombing and making back ground shots to enlarge to such a degree that they become normal life size when used back of the bombadier cockpit for projection plates The results were ex cellent

The story attempts to show the destruc tion of the Japanese battleship Haruna and glorify our American hero Colin Kelly with most of the scenes shot in Technicolor



Nature had provided a natural set ting of everglades jungle palm trees and sugar cane at Tampa Florida

All of the people in the picture were splendid to work with Harry Carey whom I have not seen in years was there I started with him 25 years ago when I was a prop man on one reel Westerns He is the same grand person that he was then Then there was a lot of laughs from George Tobias It was a pleasure to work with Breezy Eason and his assistant Lester Guthrie—and there is not a finer director to work with than Howard Hawks Charles Marshall was associate aerial cameraman on the job and he and I share alike in credit We used two cameras in the air nearly all the time and a great part of the time Mar shall flew in the flying fortress which was used throughout the picture We call it our Old Number 10

We used a considerable amount of Pan K and a certain amount of infra red film which the Kodak Company recommends for night effects and distant landscape *locations*

All in all I think we have a grand picture Although none of us had a great part to do we all had our work and we all worked together and tried to do our best The beautiful results achieved are well worth the effort It's a grand story with a fine director cast and crew How can it miss?



It was this type of plane that was used by the camera crew

By Schuyler Crail

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CINECOLOR ENLARGEMENT FROM 16MM. KODACHROME

By William T. Crespinel

About three years ago the research department of Cinecolor Inc., in an endeavor to find a more simplified method of two and three color photography, began an investigation of the possibilities that could be offered by the use of 16 mm Kodachrome It was realized at the beginning that the final procedure would involve a large expenditure of time and money for the design and construction of suitable optical equipment. It was thought advisable therefor to make a few preliminary experiments which might give a rough idea of what could be expected with good equipment before embarking upon a costly program

The earliest experiment consisted of a set up in which an Ampro 16 mm projector, with a frame of 16 mm Kodachrome frozen in the gate was placed rigidly in front of a 35 mm. Bell and Howell camera threaded with panchromatic negative The fixed Kodachrome frame was then enlarged and photographed through separation filters. From the 35 mm separation negatives produced in this manner a color print was made and viewed on the screen While far from perfect it was concluded that the results obtained warranted completion of the scheduled program

An optical printer was finally designed after much deliberation and planning which would not only enlarge from 16 to 35 mm but would also print one to one and reduce In its present form the printer can perform the following operations in either black and white two color or three color

35 mm to 35 mm
35 mm to 16 mm
35 mm to 8 mm
16 mm. to 35 mm
16 mm to 16 mm
16 mm. to 8 mm.

Its main purpose is for the production of negatives only

In the early stages of its operation the printer presented many perplexing problems in the field of color For example much work was entailed in the determination of the best combination of duplicating negative film separation filters and negative gammas which would give the best color reproduction consistent with proper over all contrast. The greatest problem of all undoubtedly was the inability to obtain, simultaneously maximum sharpness identical image size and proper image placement for register on all three separation negatives Many types and makes of lenses were tested in an effort to overcome this difficulty but to no avail It was soon learned that, under the required conditions that is short object distance and long image distance no lens was achromatic or even approached that condition With the best lens available the image distance for maximum sharpness through a blue filter was displaced from that through a red filter by 0115

It can be shown mathematically that the circle of confusion of a lens image focused on a fixed plane increases at a more rapid rate with respect to a given shift in focal length as the image distance increases A lens which is essentially achromatic when used as a camera lens (short image distance) shows extreme chromatic aberration when used as an enlarger (long image distances)

Various schemes were resorted to in the effort to overcome chromatic aberration One of these was the employment of optical flats first in the image path then in both image and objects paths for two of the separations This effected a slight improvement which at best could be merely a compromise because a flat is distortionless only for those rays whose angle of incidence is approximately equal to the sine of the angle The flats also introduced the element of uncertainty because unless carefully inserted into the optical path they could and did on numerous occasions create lateral or vertical image shifts

Attempts were then made to overcome aberration by shifting simultaneously one head (camera) and the lens along the optic axis to compensate for the shift of lens focal length for two of the separation filters In order to do this every movement was measured with extremely accurate indicator dials placed at various positions on the printer In a few instances the results were miraculous but even this system was too uncertain because image shift or lack of register could result from variable cinching of lock bolts or extremely small departures of film plane from exact perpendicularity to the optic axis

Other schemes too numerous to be listed here were devised and tried, but to no avail

Ironically the problem was solved finally by a method which was being investigated for an entirely different purpose namely for the improvement of color seperation

Here for one panchromatic negative stock had been used in conjunction with three separation filters to produce the separation negatives. It was suggested that differently sensitized negatives used with an entirely different set of filters might allow an improvement in the separations. This was tried and the results were rather astounding for not only were the color results markedly improved but also for some mysterious (at the time) reason all three images were extremely sharp and identical in size without the necessity of a shift in head or lens or any other scheme The reason for this phenomenon is quite clear now but is too involved to be included here Of interest, however, is the reversal of usual procedure wherein a theory is first formulated and subsequently applied

Another interesting problem was presented by the optical printer, namely that the combination of high contrast of Kodachrome and the optical printing coefficient necessitated the development of the separation negatives to such low sensitometric gammas that developing difficulties were encountered. If the developing times were made low enough to produce the desired gammas uneven development of the image would result and streaks would appear in the negatives If the developer were made weaker to allow for longer immersion times uneven development would still result In either case the low gammas would cause also a loss in film speed necessitating unusually intense illumination in the optical printer with its attendant troublesome heat problems In addition to all this it was found also that color separation was deleteriously affected if the development were confined to the surface of the emulsion because those densities produced by the longer wave lengths of light which penetrate deeply into the emulsion were no longer proportional to the amount of latent image formed

This problem was overcome finally by attacks in two directions namely the printer coefficient was reduced by optical trickery allowing for somewhat higher sensitometric gammas and a developer was formulated which would develop quite uniformly throughout the emulsion depth at low gammas

With all the trials and tribulations mentioned above and those not mentioned in connection with Cinecolor's development of 16 mm Kodachrome as a color taking method the problem of grain size had been conspicuous by its absence This is occasioned unquestionably by the fact that

Kodachrome itself presents negligible grain structure due undoubtedly to two factors (1) reversal and (2) some loss in resolution from the dye coupling process This latter effect is evidenced by comparative resolving power tests between Kodachrome and Black and white film

In the act of blowing up from 16 mm to 35 mm there is an inherent loss in resolving power of approximately 50 per cent which cannot be overcome anymore than the problem of perpetual motion The importance of maintaining both the Kodachrome and the separation negatives at maximum sharpness cannot be emphasized then too strongly This calls for good camera lenses good cameras and good cameramen in the photographic end and good laboratory technique and procedure in the making of the separations

In the past eight months much interest has been displayed by the industry in this new technique and each month has seen a steady increase in the number of subjects photographed in this manner Its application is particularly well suited for certain types of picture production Until now the advertising field has been by far the most progressive in its adoption

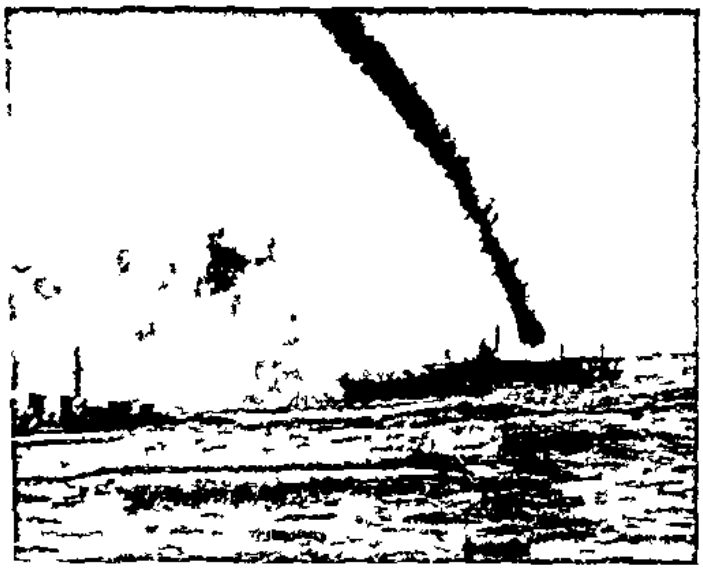
Cinecolor has processed quite a number of commercial releases recently by this method Perhaps the most outstanding example of this technique is the three color sequence in the picture 'THE MOON AND SIXPENCE currently being released by United Artists

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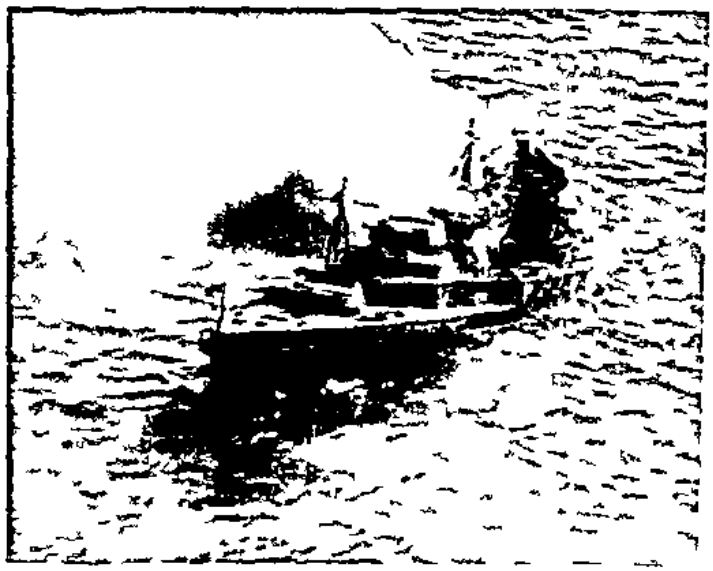
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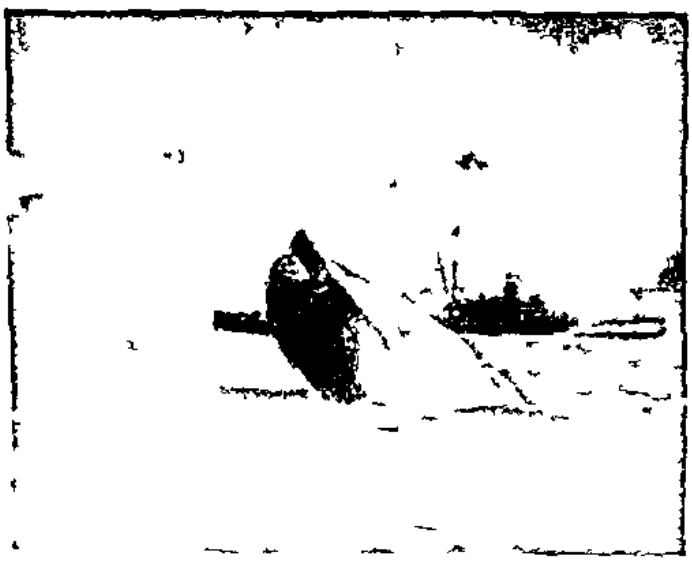
By Elmer Dyer



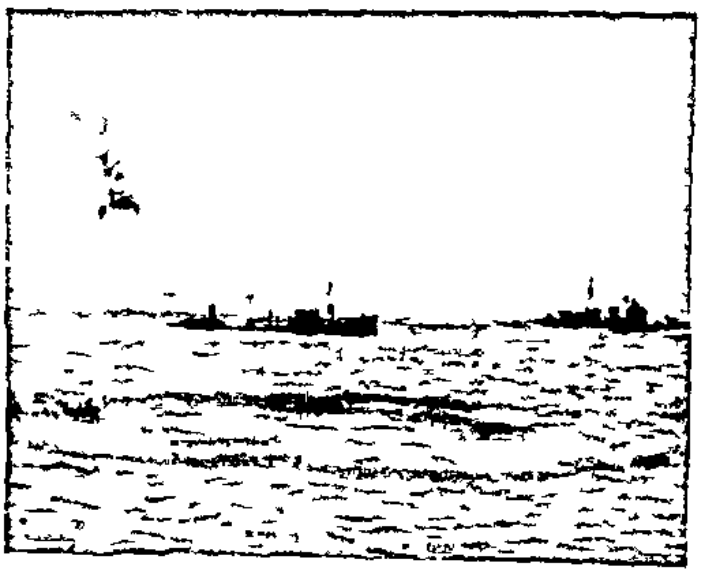
Torpedo is coming down close to the ship



Ship is afire and sinking



Turned over and going down fast



Only a swirl and bubbles on the water mark the grave

(These shots are of miniatures and enlarged from 35 mm film)



A Graflex craftsman begins inspection of a Speed Graphic which has been sent in for reNEWal

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a. What changes will be required in each type of projector mechanism to accept film of the new proposed standards (e.g., sprocket idlers, aperture etc.)?
b. What change may be desirable in each type of projector mechanism to accept film of the new proposed standard (e.g., shutters, lenses, etc.)?
c. Is it planned to retain the present picture proportions? If not what will be the new proposed dimensions and the new proposed picture aspect ratio?
d. Will it be practicable for the projectionist to make the proposed modifications in the theater and *without* the assistance of outside experts?
e. If not, will it be practicable for the projectionist to make the proposed modifications in the theater and with the aid of outside experts? If so what organizations are or will be available to make these modifications?
f. If neither (d) or (e) are practicable what special facilities and personnel will be necessary to make the proposed modifications?
g. What is the space between consecutive frames on the film in the proposed system? If it is different from the present standard, how does it affect projection?
h. Will the angular velocities of the projector parts differ from the present standards? If so what will they be and what will the effect be upon the life of the projector?

2. *Projector Lamp-Houses*
a. What changes, if any will be necessary in each type of lamp-house to accommodate it to the proposed system (e.g., carbons, optical systems, etc.)?

3. *Projector Sound Head and Associated Equipment*
a. What changes will be required in each type of soundhead to accept film of the new proposed standards (e.g., sprockets, idlers, etc.)?
b. What changes may be desirable in each type of soundhead to accept film of the new proposed standards (e.g. scanning system, etc.)?
c. Will the width and position of the sound track differ from the present standard? If so, what will the proposed new standards be?
d. Will it be practicable for the projectionist to make the proposed modifications in the theater and *without* the assistance of outside experts?
e. If not, will it be practicable for the projectionist to make the proposed modifications in the theater and *with* the aid of outside experts? If so what organizations are or will be available to make these modifications?
f. If neither (d) or (e) are practicable what special facilities and personnel will be necessary to make the proposed modifications?
g. Will the angular velocities of the sound head parts differ from the present standards? If so what will they be and what will be the effect upon the life of the sound-head?
h. If the film speed is changed, what changes in quality of sound reproduction will result? By what means can objectionable effects be reduced, to what extent, and with what additional resulting effects (e.g., changes in frequency characteristics of theater reproducing systems, changes in scanning systems, studio pre-equalization amplifier gain mechanical filtering in the sound head, etc.)?
i. Will the new systems change mediocre or just average sound reproduction to unacceptable reproduction?

B Film
1. What effect do the following factors have both individually and collectively upon the life of the film and safety of operation
a. Change of linear speed.
b. Change of sprocket diameters (number of teeth engaging)
c. Change of film tension
d. Change of film temperature at the aperture
e. Other relevant factors

C Screen
1. What changes, if any will occur in the dimensions and aspect ratio of the screen image and will re-masking or screen replacement be necessary?
2. What change if any, will there be in screen brightness?
3. What change, if any will there be in picture quality (e.g. definition, flicker, steadiness, etc.)?
4. Will the new systems change mediocre or just average pictures to unacceptably soft pictures?

D General
1. From an engineering standpoint, will the proposed system represent an advance in the art of projecting motion pictures?
2. What effects will the proposed modification have upon the theater audience?
3. What effect, if any will the proposed modification have upon the fire hazards and safety in theater operation?
4. Will the proposed change be temporary or permanent?
5. Will the proposed system be readily interchanged with the existing system in order that present standard prints may be projected when desired?
6. How much film will the proposed system conserve annually?

GENERAL

1. What will be the total cost to the motion picture industry the military forces, and the U. S. Government agencies to make the adaptation to the proposed system in terms of materials, manpower manufacturing facilities and time?
a. What will be the total cost in these specified terms to put the system into practice in the studios of the motion picture industry?
b. What will be the total cost in these specified terms to put the system into practice in the laboratories of the motion picture industry?
c. What will be the total cost in these specified terms to put the system into practice in the exchanges of the motion picture industry?
d. What will be the total cost in these specified terms to put the system into practice in the theaters of the motion picture industry?
e. What would be the individualized costs to the military forces and the various agencies of the U. S. Government to make each of the specific changes as mentioned in a, b, c and d?
2. What is the availability of all of the various types of needed materials, manufacturing facilities, and manpower required considering the present emergency conditions?
3. Can or will military forces and Government agencies readily adapt their present production distribution, and exhibition program to the proposed standards?
4. Will the adoption of the proposed system make the supply and inventory of standard parts for various types of motion picture equipment obsolete?
5. What total length of time would be required to completely adapt present standard production, distribution and exhibition, to the proposed system?
6. Can an adequate supply and inventory of new parts be made ready available as the adaptation of the new system progresses?
7. Would it be practicable to issue prints of both the present standard type and also the new proposed system, simultaneously?
8. What effect will the proposed standard have upon the re-issue of pictures, produced under the present standard, which are now stored in libraries of the motion picture industry the military forces, and agencies of the U. S. Government.
9. During any conversion period at what rate would the proposed film savings approach the expected maximum?

SECTION III

Further Procedure

The Society of Motion Picture Engineers is prepared to assist the Government, upon request, in any feasible way, in directions in which it is qualified in order to contribute toward the war efforts of the United States. It will continue to endeavor to cooperate further with the Motion Picture Industry to protect and raise the high repute and favor in which the motion picture is held by the public.

Any call for its future collaboration with the Government or the Industry will, as in the past, be promptly and effectively heeded.

And Speaking of Scrap— Page John C. Hill

This month we had a hard time to get our well known art editor, John C. Hill, down to the business of art for the magazine. He's literally surrounded by old engravings from which he is salvaging metal for that well known scrap pile. Mr. Hill took it upon himself to perform this task, not an easy one when you see the pile and as the pile gets higher his smile grows wider.

How about the scrap metal around *your* place?

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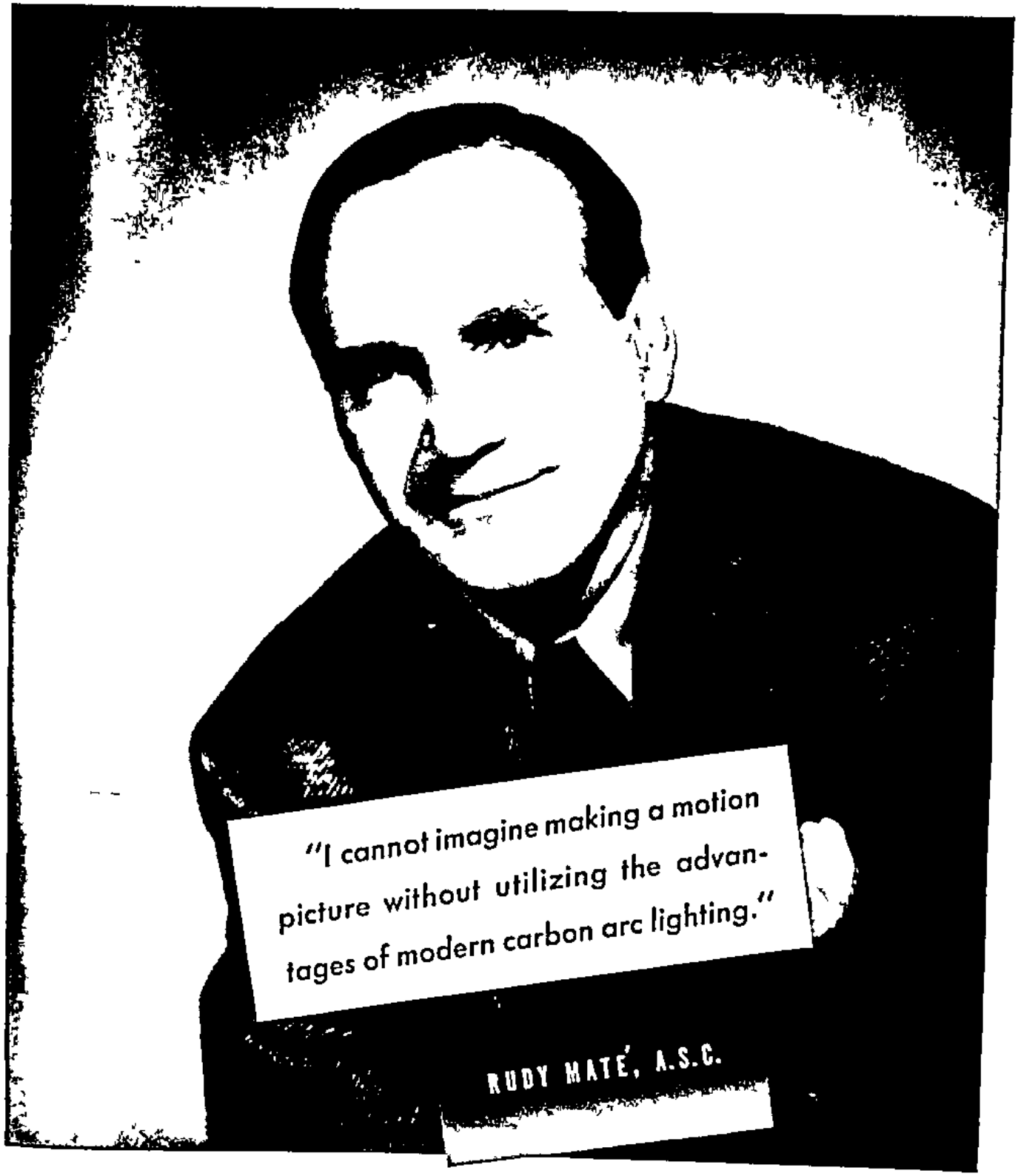
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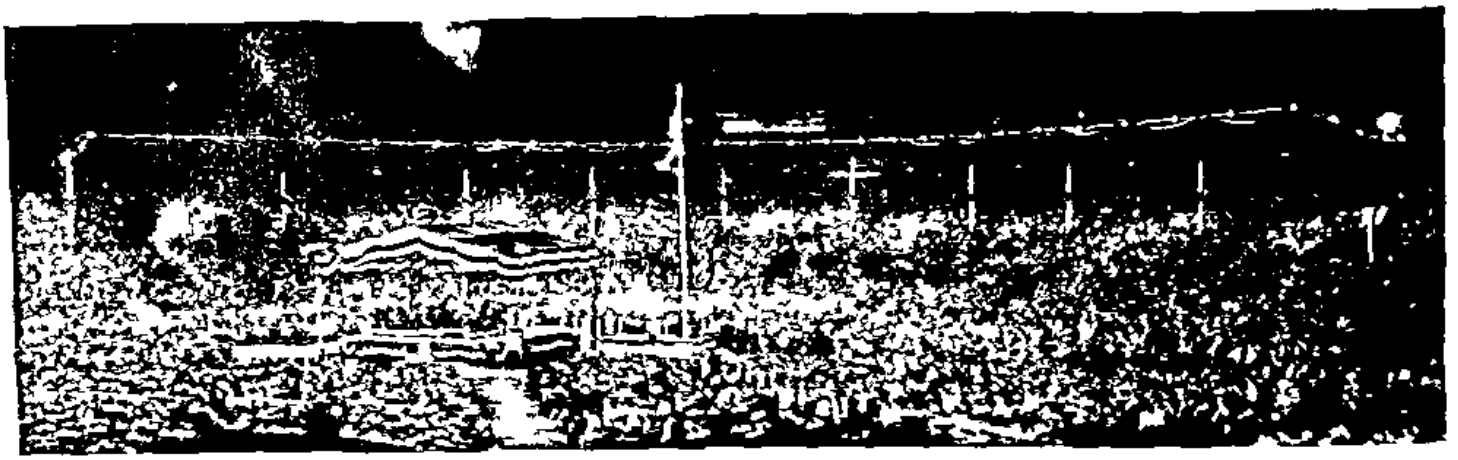
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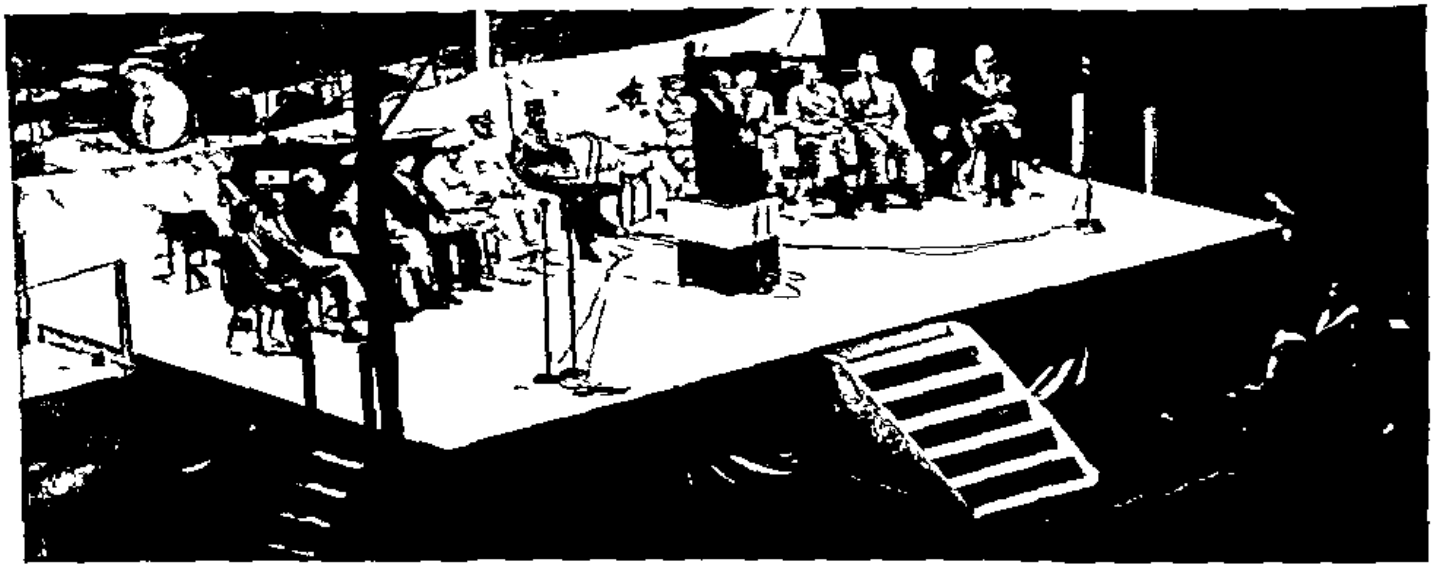
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More than 20 000 Kodak employees jam the Red Wing Stadium in Rochester as high military and naval officers present the Army Navy Production Award, for high achievement in the production of war equipment to all Rochester units of the Eastman Kodak Company Other thousands of Kodak employees of the evening shift stayed by their machines—kept uninterrupted the flow of war goods.



Thomas J Hargrave president of the Eastman Kodak Company addresses the 20 000-plus throng of Kodak employees at the presentation ceremonies. Military and naval officers on the platform are (left to right) Colonel Lewis Sanders, Captain Henry T Markland Brigadier General Herman W Schull, Rear Admiral Clark Howell Woodward, Brigadier General Harold M McClelland Colonel George W Goddard, Colonel Oscar N Solbert. Civilians are employee representatives.

pitalny's Girl Band, Baggage and All, n Hollywood for Film

Transferring Phil Spitalny and his all irl "Hour of Charm" orchestra from new ork to Universal studios, where they are lated to appear in When Johnny Comes larching Home is a major wartime roblem

Deferring to the critical transportation needs for movement of vital war materials, he Spitalny outfit, which includes 30 femmine entertainers and instrumentalists, has shaved its baggage to bare essentials while additionally doubling up on packing space

Even so Universal has been notified to be on the lookout for a shipment of 48 trunks of professional wardrobe plus 25 trunks of personal luggage exclusive of instruments.

The Spitalny troupe has already arrived in the film capital but when the baggage will turn up not even harassed transportation executives were able to predict.

Allan Jones will star in When Johnny Comes Marching Home"

Far Flung Locations Used by Universal

Universal which currently has nine top-budget pictures before the cameras and more scheduled to get under way during the Fall and Winter months, is reaching out for far flung locations With two units just returned from distant points and a third "somewhere on the Atlantic" the studio is now readying to ship three more troupes out of the Hollywood area

They are Walter Wanger s forthcoming production, "We've Never Been Licked" most of which will be lensed at College Station, Texas seat of Texas A & M College against which the story is background, and the Bruce Manning production, "Forever Yours" starring Deanna Durbin, which will utilize some San Francisco shipyards Producer Robert Fellows will dispatch players and a camera crew to Pittsburgh for the Universal offering of that name which has Marlene Dietrich Randolph Scott and John Wayne as its stars

Jack H Skirball Productions' "Shadow of a Doubt" organization headed by Director Alfred Hitchcock, arrived back at Universal last week to start work on interiors after four weeks shooting in Santa Rosa Calif., and two days later the second unit of Walter Wanger's "Arabian Nights," in charge of Director Ford Beebe, trained in from Kanab Utah, where it filmed desert battle and chase scenes

Meanwhile Richard Rosson, directing Howard Hawks "Corvettes in Action," has gone to sea from an unnamed Canadian eastern port, with a camera crew and four players to round up action footage for the feature

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PATENTS

By ROBERT W. FULWIDER, *Patent Attorney, Los Angeles*

No 2 291 821—Lens Cap August 4 1942 *Joseph H McNabb* Winnetka Ill assignor to The Bell & Howell Co, Chicago Ill 2 claims (Cl 88 1)

A cup shaped lineally elastic lens cap removably retained over the end of the lens by a flat spring whose inner annular end is secured to the camera by the inner end of the lens-casing

No 2 291 834—Color Photographic Reversal Process August 4 1942 *Walter Schulz* Berlin Friedrichshagen and *Walter Rahts* Berlin Dahlem Germany, assignors to General Aniline & Film Corp, New York N Y 4 claims (Cl 95 2)

A method of correcting the color balance between a plurality of exposed silver halide emulsion layers each of which is sensitized for a different spectral region developing the exposed layers removing the silver and washing then dyeing the layers yellow and simultaneously exposing the layers to an adjusted intensity of blue-violet light and color developing the layers in their respective subtractive colors

No 2 292,306—Method of Color Forming Development August 4 1942 *Paul W Vittum* and *Lot N Wilder*, Rochester, N Y, assignors to Eastman Kodak Co Rochester, N Y 1 claim (Cl 95 88)

Forming a soluble coupling dye derivative including an insoluble acid stable dye developing a silver halide layer in a developing solution containing the derivative and a primary aromatic amino developing agent to form an intermediate dye and regenerating the original acid stable dye in the layer by hydrolysis

No 2 292 521—Apparatus for Making Photographic Copies August 11 1942 *Joseph Horn* Wiesbaden Biebrich Germany assignor to Helge Svenson Goteborg Sweden 4 claims (Cl 271 71)

A photo copy printing and developing machine having a pair of suction tables with porous transporting bands conveying the original and copy over the first table and means to separate the original from the exposed copy before passing over the second table

No 2 292 668—Portable Photographic Contact Printer August 11 1942 *Phil A Sheridan* Bethesda Md 5 claims (Cl 95 73)

A rolling contact printing device wherein the negative and the sensitized copy are laid flat between transparent plastic sheets and a housing mounted upon rollers is manipulated upon the top sheet to expose the copy to light issuing from the open bottom of the housing

No 2 292 966—Projector August 11 1942 *Harold Osterberg* and *David J Critoph*, Buffalo N Y assignors to the Spencer Lens Co Buffalo N Y 7 claims (Cl 88-24)

An interchangeable lens unit casing for a slide projector including front and rear walls and an intermediate partition each supporting a lens element in optical alignment with openings for ventilation about the peripheries of the lenses

No 2 293 001—Photographic Color Picture August 11, 1942 *Herman Lohaus* Dessau Germany assignor to General Aniline & Film Corp, New York, N Y 21 claims (Cl 95-6)

Development of silver halide prints with an aromatic amino developer in the presence of a color former selected from the class consisting of hydroxypyridines and hydroxy 2 pyridones in which the ring N atom is tertiary

No 2,293,207—Apparatus for Panning and/or Titling Motion Picture Apparatus. August 18 1942. *Byron C Haskin* and *Albert W Tondreau* Beverly Hilles and *Herman C Muhlbach* and *William Frederick Arndt* Los Angeles Calif assignors to Warner Bros pictures Inc New York, N Y 37 claims (Cl 88 16)

Includes register of panning movements at different speeds controlling panning drive

No 2 293 106—Photographic Process. August 18 1942 *Henrik Sorter* and *Alfred Lindstedt* Beverly Hills Calif assignors to Omnicolor Pictures Corp., Los Angeles Calif 4 claims. (Cl 101 149)

Gelatin coated print stock is soaked in a water solution of glycerin and pressed in a matrix containing a dye, whereupon the glycerin is removed by washing

No 2 293,816—Method of Making Color Separation Negatives. August 25 1942 *Pierre Glafkides* Brooklyn, N Y 1 claim (Cl 95 2)

Increasing the permeability of a cellulose nitrate film layer by treating with a mixture of amyl acetate and ether and then with a mixture of methyl alcohol and acetone

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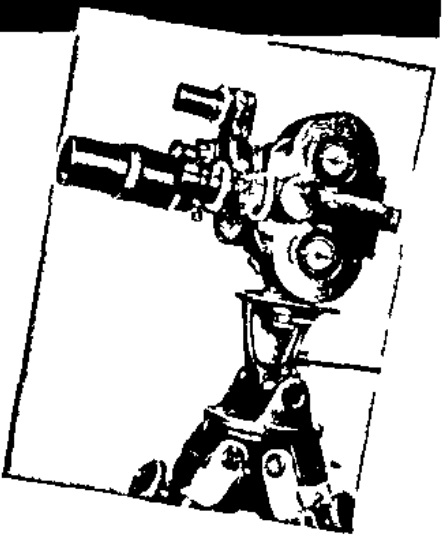
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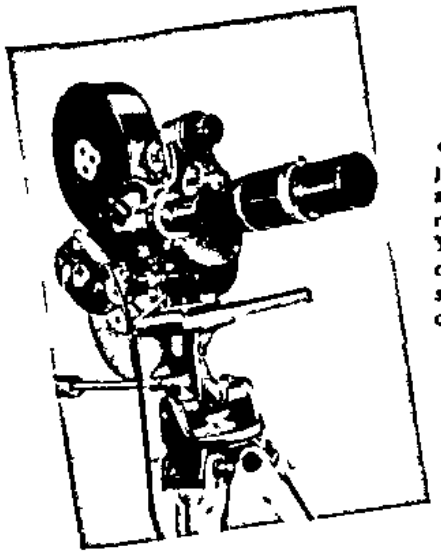
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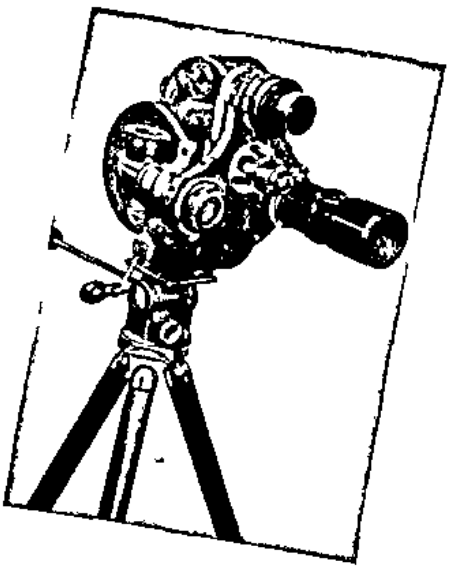
For quick shooting field work, use your Eyemo like this—light, compact, convenient. Charles Belden, Pitch fork, Wyoming finds this Eyemo ideal for filming from his plane The handle with its strap permits steady hand held operation The spring motor drives 55 feet of film per winding Precise speed regulation permits subsequent addition of sound A turret head makes each of three lenses instantly available



Suppose your next job requires telephoto shots and some scenes longer than 55 feet You unscrew the handle, mount the Eyemo on a tripod, insert the hand crank and are ready to shoot. Use the hand crank, when necessary, after the motor run is finished The governor regulates cranking speed, too



Now you re up against a studio job, but your Eyemo can handle it! In a few minutes you attach an electric motor and an external film magazine You re ready to expose up to 400 feet of film without interruption with speed control so precise that synchronized sound can be added



As quickly and easily as they went on, off come the attachments which converted your Eyemo from a hand camera to a studio outfit Again it is ready for shots afield—this time, perhaps using a lighter tripod telephoto lenses, and spring motor power

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16MM. DEPARTMENT

More on the Subject of Forethought

A few months ago we mentioned the fact that the government had cut down the amateur film output And that it would be cut by as much as 75 per cent We also commented upon the fact that while it was a drastic cut it need not work a hardship on the cinema amateur if he would but cut out the waste—with a little forethought And that while *less* film would be run through the camera—75 per cent less—it would still enable him to engage in his hobby and actually be none the less the worse for it because even when there is no shortage waste is something that should be avoided Unnecessary waste is the sign of a careless craftsman or an ignorant one And of course if he is an ignorant one, he is no craftsman!

While thinking back to some of the films that amateurs have shown us we were struck by the frequency of the occasions that someone would say to us " and here is a scene that I had to take almost three times until I finally got it!" Various reasons would be advanced for not being able to get it the first time and it is amazing how frequently it would be mere negligence or carelessness "The first time I forgot to stop the lens down and the second time I guess I just underexposed because I didn't read the meter correctly Another time the tripod was crooked In another instance it wasn't steady and while the scene wasn't worthy of being shot in the first place it was retaken with a tripod that was steadier and this time the pan was jerky

One of the things that we must remember when photographing a scene is that nothing is going to get done by itself Many people become absorbed in some single thing requiring their attention and then completely forget that there are *numerous* other things that require as exacting attention as that which might happen to be occupying them at the moment And it must be remembered that forgetting to do *any one* particular thing no matter how obvious it might happen to be will render the scene just as useless to the serious minded amateur as though everything were wrong with it

There is another phase to the problem however It is where the mistake is not one of carelessness or forgetting anything but where there is an error in judgment. Often it is a case of not knowing and here is where there is a justifiable excuse for an error But—and here is where so many make their mistakes—there is no need to shoot a long drawn out scene to learn something that could be taught to them in a few feet! And more often than not a still photograph made with the same type and speed of film and lens equipment will tell the story as well as many feet of motion picture film

One of the most common causes for retakes that could be avoided are because of faulty lighting It is our guess that this single problem has caused more ruined footage than any one other problem To begin with too much of it is left to guesswork—or just letting the lighting take care of itself because after all weren't they just taking pictures for the fun of it and didn't need professional workmanship! Fortunately this group is small and while they may have abilities and interests that put them in the class of the serious amateur their attitude towards this one of the most important aspects of photography—lighting—is suggestive of their not belonging to this class But whether or not they belong to any one group or another is of little import The fact that they still will shoot a lot of film have it come out bad and then proceed to do the whole thing over again when the first time should have been sufficient and satisfying to them is enough to warrant their taking heed of the fact that the needs of the times have reduced the amount of film available to them and that they must conserve

Something else that could be done without is the long run of footage after the camera has started running and before the action begins and then again after the action stops and before the camera stops We are at a total loss to understand why many many feet are wasted in this manner when it is only cut out during the editing of the picture or else left in there to plague everyone who sees it afterwards!

But we still feel that the answer to the problem is a careful planning of everything *before* a single foot of film is run through the camera Is the story something we wish to tell that is is it worth telling? Are you equipped to photograph what you want to and not going to shoot it and then decide that it isn't what you wanted because you were unable to do it in the first place? Is your lighting adequate and correct? Are you remembering that the camera is not a robot, and that you must see the things that must be done and that forgetting them will mean the ruin of the scene?

We feel that with careful planning the problem of conservation of film is not only an easy one, but something that will have some beneficial results on our hobby

Photographic Competition

Appealing to photographers and camera enthusiasts to help record the wartime work of the American Red Cross both at home and abroad Chairman Norman H Davis has announced a national photographic competition with 122 prizes consisting of war savings bonds with a total maturity value of $5 125 The competition will continue through October November and December, and two classes of awards will be made for the best photographs submitted each month 36 prizes will be awarded to be followed with 14 grand prizes to selections from among the monthly prize winning entries

"The American Red Cross is seeking to enlist the photographers of America in a patriotic endeavor which seems admirably suited to their talents," Chairman Davis said in announcing the competition "We need the imagination of camera enthusiasts to capture the drama the pathos, the sympathy, the mercy embodied in our work

"Red Cross activities at home and abroad have expanded greatly in the war effort. This story must be told if the vital services entrusted to the Red Cross are to reach their greatest usefulness We believe that pictures offer one of the most effective means of informing Americans of the great organization which has been developed through their generosity and hope that the photographers of America will respond to this patriotic call"

Entrants may submit as many pictures as desired at any time during the contest but no photographs which heretofore have been published are eligible All entries must portray an activity of the American Red Cross or be symbolic of the spirit of the American Red Cross Red Cross chapters the country over are prepared to assist photographers in the selection of subjects

The competition will be known as the "Red Cross National Photo Awards" Headquarters are at 598 Madison Avenue, New York City and all entries must be sent to that address Under the rules of the contest which is being directed by Louis C. Boochever of Cornell University, both amateur and professional photographers are eligible to take part The only persons barred are paid employees of the American Red Cross and its local chapters

All awards will be in the form of war savings bonds and the values indicated for the different prizes represent maturity values of these bonds Monthly awards in the contest will consist of a first prize of $200 in war bonds a second prize of $100 in war bonds a third prize consisting of a $50 war bond and 33 Special Merit Awards consisting of a $25 war bond each First prize in the grand awards consists of

war bonds with a maturity value of $500, second prize, $300 in war bonds third prize, $200 in war bonds fourth prize, $100, and 10 honorable mention prizes, each composed of a $50 war bond Negatives and publication rights of all prize winning pictures become the property of the American Red Cross which also reserves the right to purchase, at $5 each the negative of any photograph entered in the contest that does not win an award

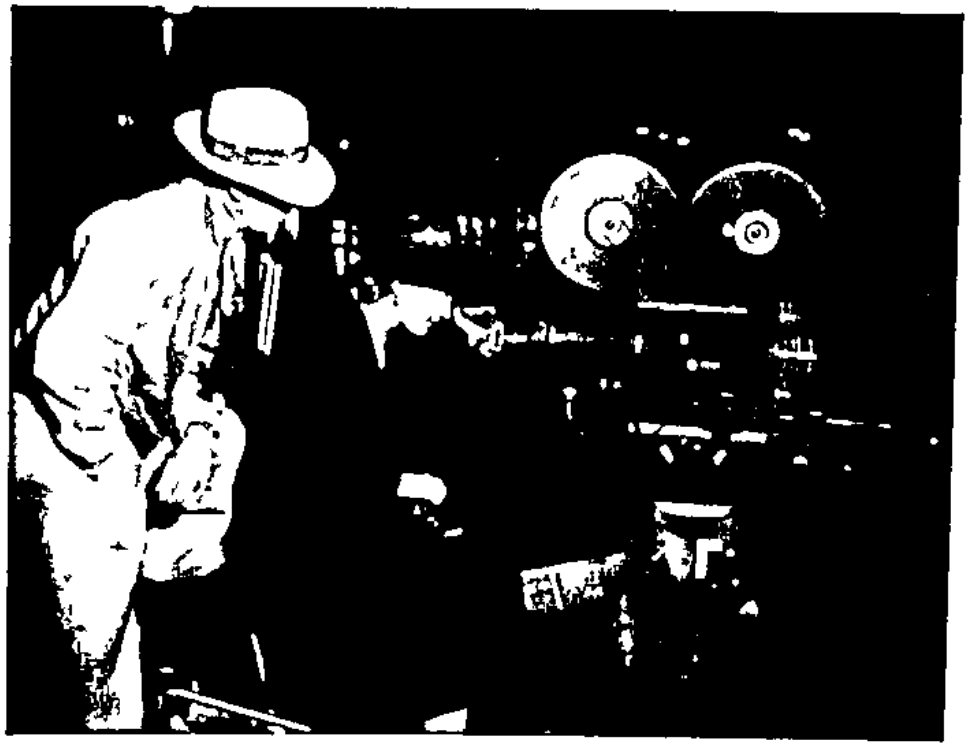
Funds for the awards are being provided by the Photographic Society of America and other friends of the Red Cross. Monthly prize winners will be announced during the course of the contest and grand prize winners on February 1, 1943

When taking pictures of Red Cross subjects on military reservations Army and Navy restrictions must be observed Any photographs picturing military or naval activities or equipment must bear the stamp of approval for release and publication by the proper military or naval authorities.

Pictures may be made on any type of film, but not on glass plate negatives No print or enlargement more than ten inches in the longest dimension may be entered While there is no minimum limit, prints no smaller than five inches by seven inches are preferred They should be mailed flat and unmounted On the back of each entry should be printed the name and address of the competitor and a brief title or description of the picture Negatives must not be submitted but should be returned by the entrant so that it may be turned over to the contest director if he requests it. However men in the military or naval service may submit negatives with their prints

Each month's entries will be judged by juries of men and women prominent in the photographic and art world Final awards will be made by a group of nationally prominent photographic experts Men in the military and naval service who wish to submit entries may obtain printed copies of the rules governing the contest and suggestions of subjects from Red Cross field directors working with the armed forces Civilians may obtain these from photographic supply dealers

Buy United States War Bonds and Savings Stamps NOW!



Ivan Venable on "Ten Dollar Raise" set, at 20th Century Fox, knows a little something about a camera herself.

SCRAPS

From L.A. to IA

From Hollywood Reporter, Sept 16 "When Bill Clothier, who was Lorenz operating cameraman on many pictures left the last day (to date) shooting of 'Name, Age and Occupation' he took a fast train to an army camp and now he's the Capt William Clothier who shot two of the raids over Germany

Colonel Darryl F Zanuck has announced the start of a series of twelve films on Identification of Army Aircraft each one dealing with a different type of army plane

These films will be produced for the Council by the Walt Disney Studio, under the direction of Erwin Verity, assisted by Robert McCormick with Carl Nater as Unit Manager Andy Anderson Director of Photography assisted by Ernie Smith, John Hersch Layout Man and Henry Gottlieb in charge of grips

Remember how we used to hate 'jography ? Think how the President has to cram to keep up with it now And with the sugar situation as it is, think how many eyebrows would be raised if Mrs Roosevelt happened to whip up a batch of fudge

Where's Your Scrap?

One of the magazines this month carries an article that hits all of us It tells how we are a nation of string savers Starts when Johnnie is a small boy and hoards bits of string old nails rocks and maybe even a toad in his pockets It goes on through the years Then old pans, the good old wash boiler that springs a leak, old pieces of pipe, wire, a piece of brass rod—we can't bear to throw 'em away, so we pile them neatly, or perhaps not so neatly in the garage and the spiders raise their families in and around them Like Filber McGee's good intentions about 'cleaning out that closet' we, too, plan on cleaning out the garage "one of these days" Maybe we get at it finally, but gosh we can't throw away any of this stuff—might need it someday

Were we psychic? Maybe we were Anyway we were something better than we knew at the time The old wash boiler is going into something that will boil the Axis, the old pipe is a handy weapon in itself, but it will go into the making of a better one, so will the old rod, wire and any metal we may have

And now, we know why we saved it And this is no time for procrastination

GET ANY AVAILABLE METAL ON THE SCRAP PILE FOR UNCLE SAM RIGHT NOW.

TRADEWINDS

Eastman Announces Book on Motion Picture Films for Professional Use

Topping their many years of extensive research long technical experience in manufacture and close cooperation with the motion picture industry, the Eastman Kodak Company has just announced a new book— Eastman Motion Picture Films for Professional Use —which is designed as a reference and guide for all professional photographers

Covering both 35 and 16 mm films the book presents the most exhaustive analysis of Eastman films which has ever been compiled From a discussion of emulsion characteristics through graphic and detailed specification sheets the book in every way fulfills its avowed intention of assisting the photographer to first, choose the film best suited to a particular purpose, and second make the best use of the film selected

The main part of 'Eastman Motion Picture Films for Professional Use" containing 72 pages is divided into two principal sections and deals with the various types of negative positive sound recording and duplicating films that are used in most commercial practice

The first section is devoted to a discussion of the various film characteristics both photographic and physical It deals, also with processing the use of filters tropical handling etc and it is intended as an aid to the interpretation of the specific data given for each film in the individual film specification sheets which make up the second section

An eight page supplement on the commercial use of 16-mm Kodachrome Film is also included This supplement covers such subjects as lighting for Kodachrome choice of subject colors the making of sound records for use on Kodachrome duplicates and so forth It also contains specification sheets giving data on the properties of Kodachrome Films Regular and Type A

The book is attractively printed strip indexed for ready reference and bound in stiff covers with a semi concealed Wire O binding that allows the book to open flat to any page The covers are laminated with Kodapack for protection against soiling finger prints moisture and other marks It is priced at $2

G E Blackout Bulb

Fort Belvoir Va —A blackout bulb which eliminates need for special drapes and shades, gives ample light to avoid stumbling over furniture yet cannot be seen from the air has been successfully developed and tested by Army engineers here and will probably soon be on the market

The new bulb is heavily coated with black except for an orange button about the size of a nickel on the bottom It burns on average house current and will sell for about 25 cents One bulb per room will provide enough light to permit occupants to see each other plainly as well as furniture doors and windows Only the usual household curtains drapes or shades are needed when this bulb is the sole source of light engineers said

Army pilots and engineers tested the bulb recently in a tiny town in New Jersey (only forty houses) Each home was equipped with the blackout bulbs and shades and curtains left up When pilots flew over they were unable to see a single ray of light The bulbs were developed with the cooperation of the Nela Park Engineering Department of the General Electric Company at Cleveland Ohio

Army engineers explained that orange was selected as the color for the light emitting button since it is near the red end of the spectrum yet unlike red is not confused with exit lights Red has been found to be the light least visible from the air

J A Maurer 16 mm 'Certified Sound'

Because of the present need for convenience economy and good results in the production of training motion pictures there is particular interest in a new 16mm Recording System offered by J A Maurer Inc of New York under the name of "Certified Sound" This complete recording unit embodies a combination of features not heretofore obtainable commercially in the 16 mm medium

The new J A Maurer 501 D Recording System—"Certified Sound —brings a new conception of efficiency convenience and ease of operation to 16 mm sound recording Certified Sound is definitely new in construction and design The 501 D System incorporates the compressor circuit, which functions automatically and to a great extent minimizes the possibility of "over shooting the four position mixer which enables the signal output from four pick up sources to be combined in one track the AGN control circuit for ground noise reduction the new G galvanometer for improved sound track exposure the unit control panel for the regulation of the entire system from one point and many others In fact the long experience and research of J A Maurer Inc in this exclusive field has been summed up in this new and advanced 16mm sound recording system

The component parts of the Certified Sound System are as follows

The Recorder, which provides the smooth film motion essential to good sound results The high standards of mechanical precision embodied in the film moving mechanism are responsible for the freedom from "wows" and the general professional quality of Certified Sound recordings The Recorder is easy to thread and the sound recording element remains in permanent adjustment Interchangeable gear driven 400 foot dual magazines are used and these will accept film in laboratory packing or on daylight loading spools The Recorder will run film in either direction at will a feature which enables sound tracks to be made most conveniently with reversal or negative films

Incorporated in the Recorder is the new Type G Galvanometer a precision electro-optical instrument of high sensitivity, yet ruggedly built and permanent in adjustment Its frequency response is "flat" from 30 to 8000 cycles with a minimum of distortion conditions essential to good sound quality Its improved optical system will give better sound track exposure The exposure lamp itself is of the prefocused type and may be replaced accurately without adjustment

The new 162A Amplifier is the master control unit of the Certified Sound System and is convenient and compact It incorporates the new compressor circuit, which automatically guards against overshooting and gives a higher sound track level Four input channels are provided which enable the user to "mix" or combine signals at will from four similar or different sources such as microphone disc pickup other sound tracks and the like The well known "AGN" (anti ground noise) circuit is also a part of the new amplifier This operates during normal recording to suppress the ground noise However the AGN control may be switched off for making original recordings for direct playback or for essential exposure tests The Amplifier also incorporates the Speech Equalizer which may be controlled in steps to give optimum results under various conditions of recording or re recording A Step Film Equalizer provides the proper adjustment for sound track duping on black and white or Kodachrome A high and low pass Filter System is included as well

The control panel is designed for convenience in operation and carries on off switches for all control circuits dials for the individual mixer controls and a master gain control Meters indicate sound volume level exposure lamp current and the AGN current Connections are conveniently made through Cannon plugs at the outer edge of the panel Only two main cables are

needed for recording normally with the microphone and these cannot be incorrectly attached A jack is provided for the head phones which are supplied for monitoring the sound

The Power Supply Unit converts the regular 115 volt 60 cycle A C into the high and low voltage direct current supply needed to meet the various requirements of the system No batteries of any kind are used The Power Supply is automatic in operation and needs only to be connected up plugged in and switched on

The Recorder, Amplifier and Power Supply units are contained in durable metal bound fiber carrying cases Panels and metal surfaces are finished in gray crackle The entire system operates on 115 volt 60 cycle A C Pilot lights in Recorder, Amplifier and Power Supply panels indicate their live state at a glance The Recorder is driven by a synchronous motor and will operate in conjunction with the well known B M Camera to produce fully synchronized sound pictures of the highest professional quality Further detailed information may be had from J A Maurer Inc 117 East 24th Street New York City

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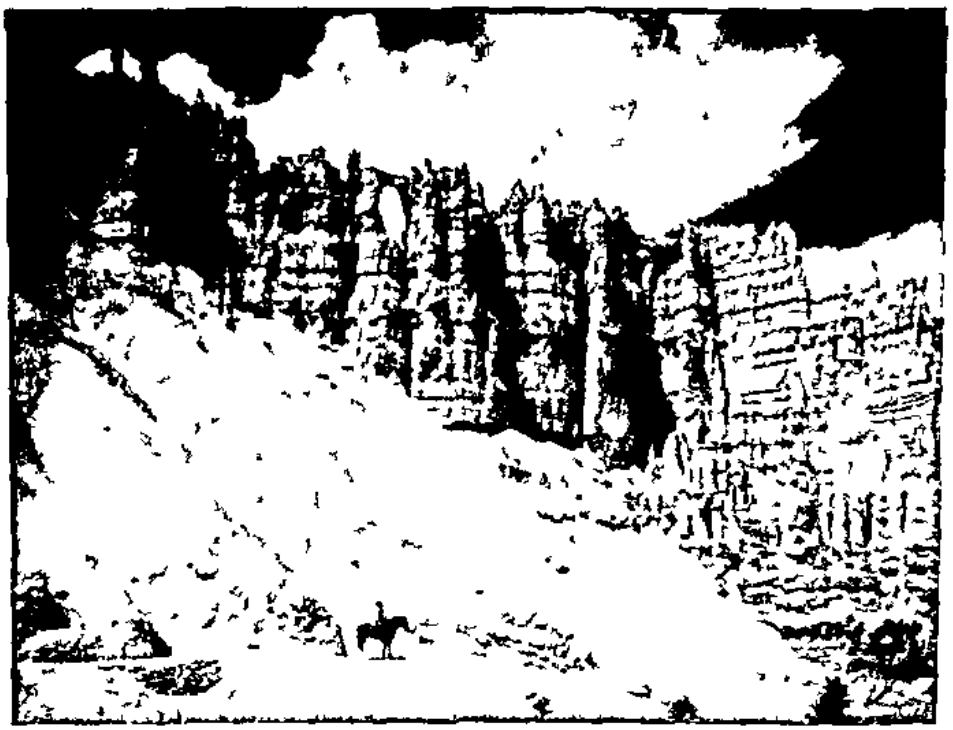
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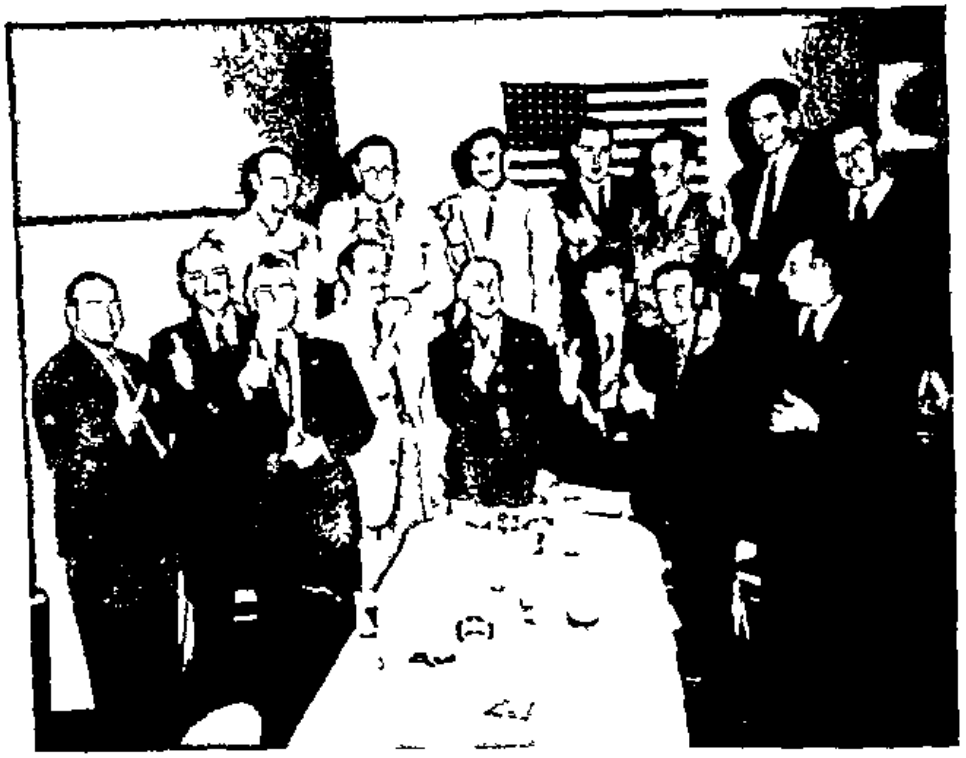
Grand Canyon **By James B Shackelford**



Bryce Canyon with storm brewing toward the left



Grand Canyon from point near Bright Angel Trail



Get together farewell dinner for Captain Sam Greenwald

Reading left to right in the foreground are Arthur De Titta Don Mack Herbert Tice Willard Vanderveer Sam Greenwald Joe Johnson Frank Blackwell, Don Brinn Back row Herbert Aller Mervyn Freeman Charles Lehman "Hank" McCance Eric Powell, the next man we were not able to identify before going to press, and Irving Koverman



The St Helaire Family

They Say···

By RELLA

● Joe Walters has four brothers in the U S Army

● Art Marion's two boys in service Hal ley in the Merchant Marine and Henry in the Coast Guard

● Tom Brannigan leaves for service in the Army

● Walter Young of 20th Century Fox now Chief Petty Officer stationed at Washington

● Lt M Burkholz says hello from Florida

● Alex Kahle at General Service for Charles Rogers production

● Sidney Zipser in the Army

● Marcel Grand C P O in the Navy

● A baby boy for the Guy Bennetts

● Earl Crowley enlisted in the Navy

● Art Reed private in the Army

● James Stone a Captain in the Army Air Force

● Gil Warrenton a Captain in the Army Air Force Both Stone and Warrenton leave for Florida where they will join Weisbarth, McIntyre and Greenwald

● Kit Carson has departed with the rank of Technical Sergeant, U S Signal Corps.

● Manuel Corral has left as Technical Sergeant in the Signal Corps

● M B Paul and Charles Lehman now serving on the executive board of Local 659

● Walt Disney is engaged 100 per cent on defense work and Mickey Mouse won't be seen in his usual antics for some time

● A girl for the Bob Surtees.

● Don Anderson has left for service in the U S Navy as Chief Petty Officer

● Off to location at Fort Belvoir Virginia Billy Snyder first cameraman Fred Bentley second George March assistant Paul Hill and Earl Metz, technicians Jack Chandler loader

● John Caldwell Sergeant in the United States Signal Corps

● James V King our esteemed Recording Secretary enlisted for service in U S Army as a buck private However we don't expect to see him in that rank for long

● Jack Thomas a baby girl

● The St Hilaires announce the arrival of a baby boy likewise the Bobby Goughs, and the Al Climes a girl

● Frank Pearson formerly at Technicolor now Ensign in U.S.N.R. in the Field Photographic Branch of the Office of Strategic Services.

● Bob Gibeaut entering Naval Photographic Unit as First Class Petty Officer

CONFIDENCE

WITH the spotlight on production economies, directors and cameramen have *complete confidence in the dependability* of Eastman negative films with their special abilities, wide latitude, and exceptional uniformity. Eastman Kodak Company, Rochester, N. Y.

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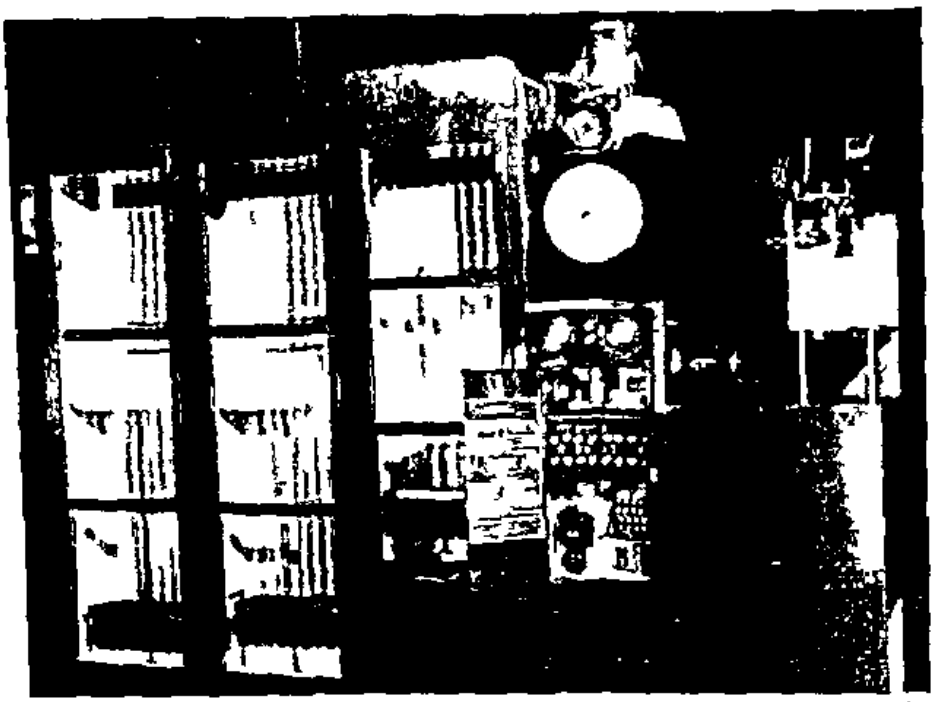
PLUS-X
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SUPER-XX
when little light is available

BACKGROUND-X
for backgrounds and general exterior work

EASTMAN NEGATIVE FILMS

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THE 16 MM REVERSAL FILM PROCESSING MACHINE

The Houston 16 MM Reversal Film Processing Machine is fully automatic The rate of processing is at fifteen feet per minute, with an output of 900 feet per hour

Thermostats automatically control the solution temperatures and the drying rate in the drying cabinet.

There is a variable speed control to compensate for exhaustion of the solutions.

This machine is portable and was designed solely for processing 16 MM direct reversal film.

Operators will be trained for purchasers without cost by the Houston Company For information on training and detailed information on the Houston Developing Machines, write to the H W Houston Company



Already in use by the fighting forces of the United States these latest and most modern film processing machines for on-the-spot motion picture developing, can be supplied through application of high preference ratings

Both machines are crated and shipped completely assembled Power is adjusted to the needs of the area to which it goes

THE 35 MM NEGATIVE AND POSITIVE MACHINES

Based on a normal negative developing time of 6 minutes, the Houston 35 MM negative machine will deliver within the range of 15 to 30 feet a minute the positive from 30 to 60 feet a minute

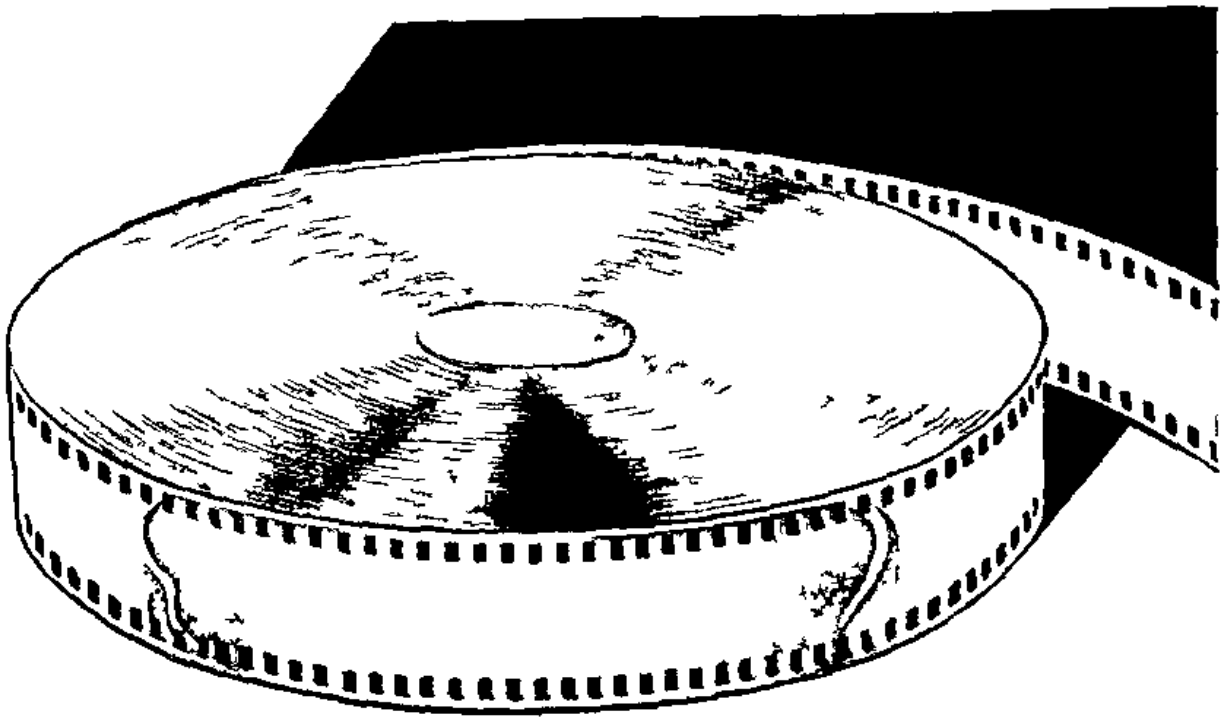
The machines are completely self-contained, requiring no additional equipment. Provisions are made to electrically heat and filter the air for the dry box compartment automatically controlled at any temperature between 75 degrees and 100 degrees fahrenheit. Temperature control is also provided for the developing solution stop and hypo through a self-contained refrigeration unit which is fully automatic. Replenishment of the development solution is by automatic gravity feed The film is taken off on standard 1000 foot reels The loading flange is provided with a follow reel which operates a buzzer indicating when the end of the roll is near and the loading section allows stoppage of the film feed for splicing

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'THAT S NO CALLING CARD' you say? You re right It's only raw stock But it s also a 'calling card for the du Pont technicians who offer you their skilled services These men know their du Pont Film and how it will act from the camera exposure to the projector from raw stock storage to print shipment. They re always on hand to help you get the fullest performance from your du Pont Film. In your studio, on your location, in your laboratory *Du Pont men follow through'*

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THE CAMERA AS A WITNESS

By Robert F. Borkenstein
Chief Technician, Indiana State Police

One day recently a workman in an Indiana war plant glanced under his machine and was startled to see a waxed paper tube to which was attached two electrical wires

Unwilling to risk the lives of skilled workmen and hoping to save priceless machinery, the plant protection officers evacuated the plant and called the Indiana State Police Police laboratory technicians soon found that the "bomb" was a harmless electrical condenser of a size and shape very similar to half a stick of dynamite Machines were restarted and production for the fighting forces was resumed For the technician and trooper, it was routine

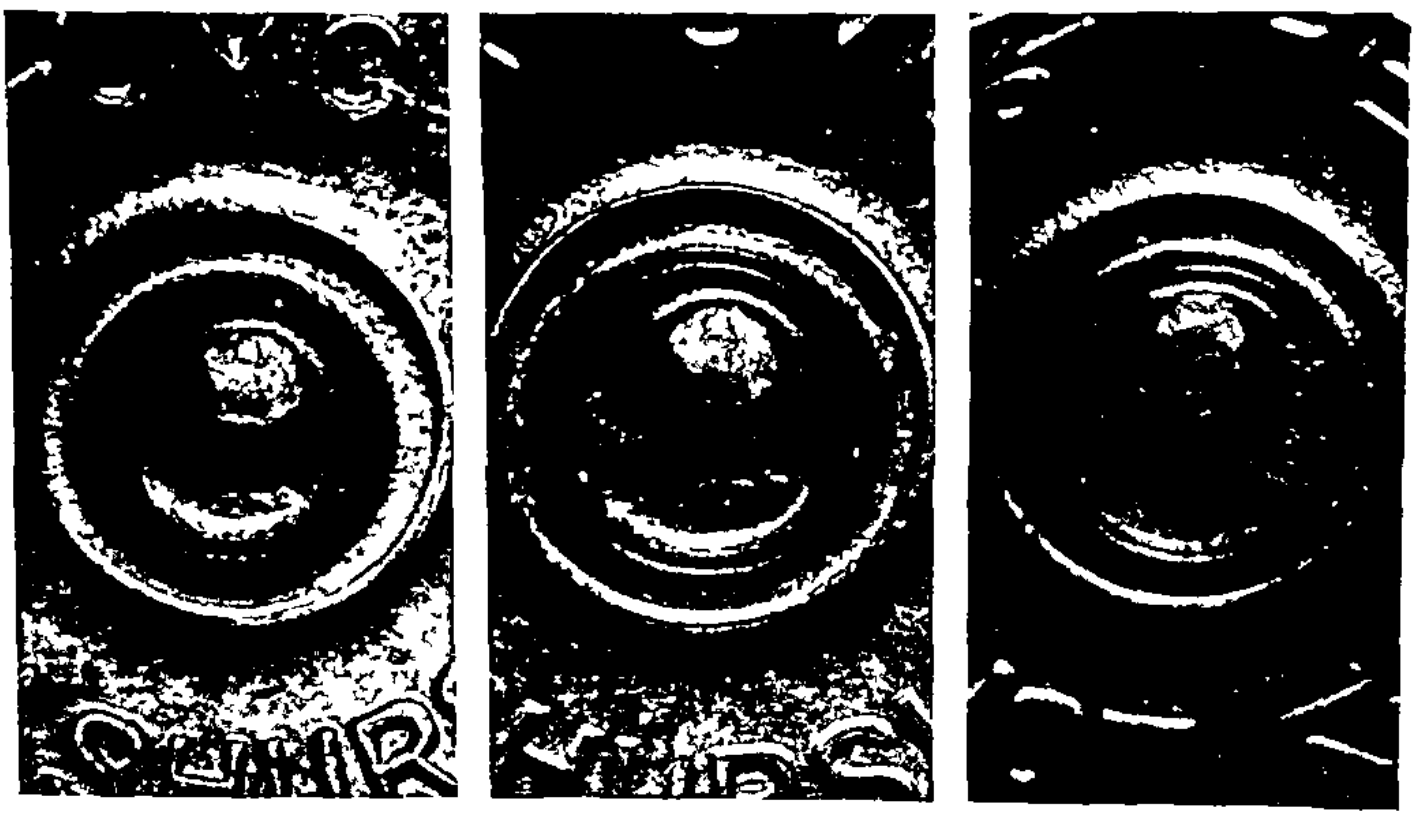
Armed with his graphic type camera, along with his high power rifle and shotgun and supported by technicians in eight post laboratories and the central laboratory at Indianapolis, the Indiana state trooper is playing a prominent part on the home front in these war days Lending assistance to military, federal and city investigative branches, aiding war plants set up identification bureaus fingerprinting CAA pilot aspirants together with a multitude of other tasks, occupies our technical staff daily

In building this bulwark of scientific equipment for police research we have proceeded on the theory that the laboratory is an extension of the trooper's senses, giving unchallengeable support to his investigation Preliminary tests are conducted by the technician in the outlying posts while the main laboratory makes complete analyses when necessary

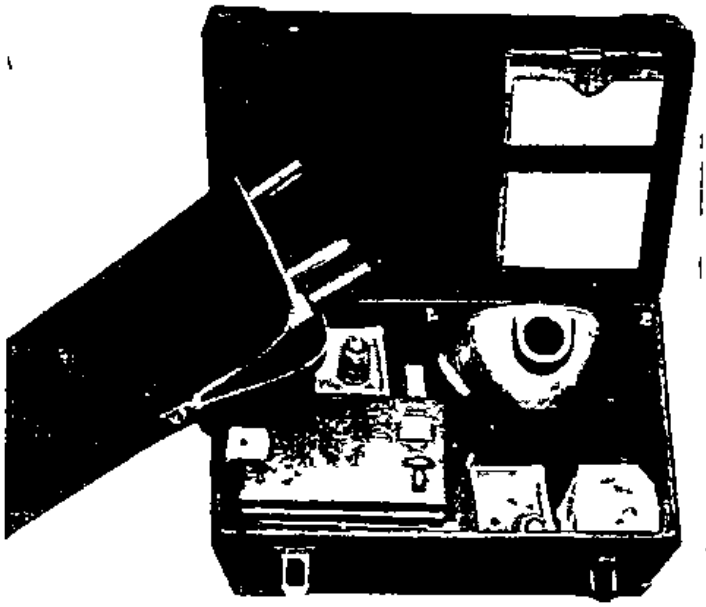
Three hundred cameras constructed in our Indianapolis laboratory are focused on scores of varied incidents in Indiana each day Each of the posts is equipped with two Speed Graphics, one for "mug" photographs and the other for the technicians outside work Darkrooms in all posts are designed for efficiency and have simple but effective equipment for turning out quality prints

Wide use of the camera by police officers was adopted about four years ago Don F Stiver, superintendent of state police, and his board decided to issue each trooper photographic equipment for accident investigation Post technicians could not satisfactorily cover long distances to accident scenes and free lance photographers were too busy or could not answer calls quickly enough

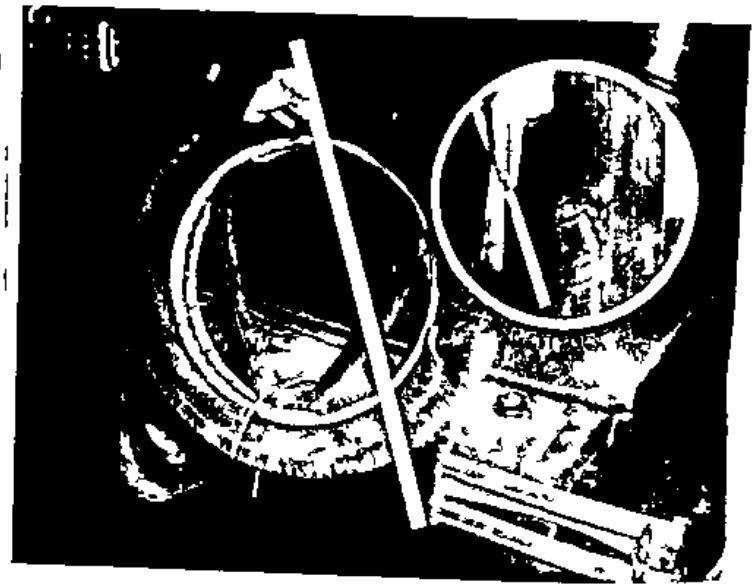
But cameras were expensive, and the



Photograph on extreme left shows primer of a shotgun cartridge found near the scene of a slaying Center is photograph of cartridge fired from a suspected gun Right pictures the primer of cartridge fired from the other barrel of suspected gun Regular copying technique, with sharp oblique lighting to show surface markings and soft fill-in light to capture detail in the depressed parts were employed to make direct enlargements with the bellows greatly extended Actual photomicrography is used only where tremendous enlargements such as 500 or 1000 diameters are required



Cost of this sturdy 4 by 5 camera and kit, designed by the author was $35 Blue prints may be obtained by other state police departments Open flash is used for shots requiring artificial light, all shots are made from a tripod



When backed from the road to permit a murdered man's body to be tossed into a ditch this automobile bumper left an impression on a utility pole Photographs, made by Indiana State Police, were an important link connecting the car to the crime and convicting its occupants Indiana troopers depend on their cameras almost as much as guns

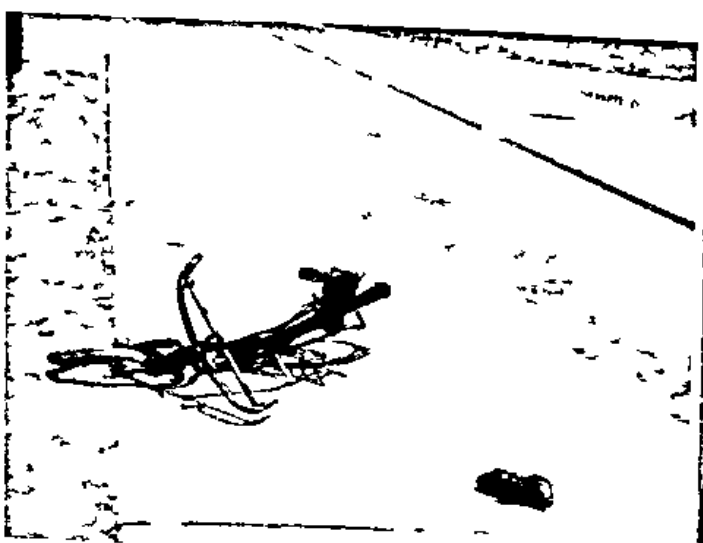
budget was too limited to purchase outfits The project was almost dropped

By eliminating all but bare essentials however we developed a camera in the laboratory to cost the $35 permitted in the budget The camera was built by police technicians from specially designed parts About half the cost of each camera was spent on a lens and shutter The result was a compact outfit that could take the daily pounding and bouncing of patrol cars and still make accurate pictures The homemade camera was so successful we had many requests for blueprints from police departments in other states

For the 4x5 camera an f7.5 anastigmat lens of 6¼ inch focal length was chosen in preference to a more expensive speedy lens since most of the state policeman's shots are made of stationary subjects from a tripod The lens is mounted in an Ilex Precise shutter with speeds up to 1/100 second The kit includes a hand flash reflector four flash bulbs two cutfilm holders a yellow filter, and a focusing cloth Envelopes are provided to preserve negatives after development Complete technical data for each exposure is recorded on the front of this envelope at the time of exposure

The camera has played an important part in all types of investigation and subsequent prosecution

The "footprint left by a peg legged man was photographed and the wooden leg of a suspect was compared with the



Photograph made during routine bicycle-auto accident fatality investigation Over 3,000 accident record pictures annually have less than five per cent failure due to vigilant check of results of individual officers



The still-missing person who made the above footprint is a candidate for Indiana's Michigan City State Prison—on a murder charge

impression photograph which later convicted the fellow of illicit liquor operations. Our handwriting expert, Technician Ed Schroeder, often takes photographs into court to settle documentary disputes. By using greatly enlarged photographs of questioned documents he can illustrate points that caused him to form an opinion. Photographic records of traffic accidents aid in fixing the blame, and, in several instances have called attention to highway engineering faults.

Statistics show that in rural Indiana the ordinary shotgun is the favorite homicide weapon. The old rabbit gun is handiest for murder bent ruralites it seems. In making firearms identifications of smooth bore weapons, we cannot use rifling comparisons but, instead employ microscopic comparison photographs of the primers, breech face markings and ejector marks on expended shotgun cartridge cases.

In a certain hoosier farming district, a shotgun barrage cut down a farmer walking along a road. It was dusk, the blasts came from a screen of bushes, there were no witnesses. Seven cartridge cases were found in a pile behind the bushes and our investigators decided an automatic shotgun was used in the attack. A weapon of that type was owned by a neighbor, who subsequently was convicted by a jury. Photographs were shown in court and definitely tied the neighbor to the shooting by proving his gun was used.

We have been elated by the camera results obtained by our troopers. Carefully prepared courses in photography were added to our police training schools, held at Indiana University and Culver Military Academy. Now many of our state officers qualify pictures in court where commercial cameramen fail to have their prints admitted. In some cases we have had to restrain trooper enthusiasm to make pictures.

The training courses have been so successful that we have had invitations to give police photography lectures the past four years at the Northwestern University Traffic Institute and the Indiana University Police Administration school.

Trooper photographers are taught to retain the greatest possible detail in their prints, artistic value, reproduction qualities or brilliance are secondary. High speed panchromatic film is used and, since we use a tripod, the lens is well stopped down. Slow developers are used in the laboratories to capture more detail and keep middle tones. The trooper is instructed in methods of recording on film a true representation of the accident or crime scene, and to have all technical data at hand to lend an air of reliability to his court testimony.

A schedule of refresher courses in photography is maintained. Imagine the astonishment of a farmer, whose old bus had skidded into a ditch, to see twenty or twenty five state policemen swoop down on the scene, armed with cameras to make pictures of his slightly damaged fender from all conceivable angles.

Today, police photography is on the threshold of a new development — color photography. While not at present entirely practical for police work the time will arrive when color photographs will be used in identification work almost universally, and crime scenes and laboratory illustrations will be taken into court in color.

As long as three years ago, the Indiana State Police resorted to color prints for identification purposes. Three thousand posters on which appeared a reconstructed and colored likeness of a fugitive, long wanted for patricide, were prepared in our main laboratory. The hunt ended when the man's body was washed up from Lake Michigan a few weeks after the posters were distributed. It was believed to be the first time color had been employed by any police organization.

Use of the camera will continue to expand in Indiana police circles as more municipal departments follow the trend established by the state police. Photography is rapidly becoming "the language of the witness."

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The Well Dressed Cameraman of Twenty-seven Years Ago



No, they aren't all set to go horseback riding. It was a wise thing in those days to protect shins with puttees or boots and it was necessary to get so close to the camera that caps were worn backwards. This old photograph was made at Universal back in 1917 and is reproduced here through the courtesy of Eddie Kull. Identification by Steve Norton, left to right: Milton Moore, Fred Granville, Anton Nagy, Steve Rounds, Friend Baker, Eddie Ullman, Allen Siegler, Omar Hill, Charles Rosher, James Brown, Ralph Morello, Steve Norton, Pork Ries. Kneeling: Lee Bartholomew and William C. Foster. The cameras shown are Prevo, Pathe and Debrie—and the cameraman toted them unless he could prevail upon some actor to help him.



Glo a Jean



G ace McDonald



Elyse Knox



Lou se Allbri ton

Portraits by Roman Freulich, Universal Studios



Brian Donlevy



Anne Gwynne



Elyse Knox



Diana Barrymore

"PHOTOGRAPHED by U.S. ARMY SIGNAL CORPS"

By Sgt Dan Rocklin

Give the drill sergeant his due When it comes to discipline and morale marching and maneuvers, advice and leadership there's nothing to replace him There never was and never will be But when it comes to technical training and instruction he is passe No one soldier is capable of keeping abreast with the latest developments in modern warfare So the Army has taken him from the lecture stand Nowadays each and every one of the Army's new recruits is ushered right into the offices of the foremost technical experts in the country Impossible? No but not easy Uncle Sam does the trick with Training Films Pictures that show not only what the soldier will have to do in battle but exactly under what conditions he will have to do it

The modern training film as the Army knows it today got its start in World War I During the latter months of the great conflict 63 films were made and production was really getting under way when the armistice was signed

Production was discontinued after the war until 1928 when the coming of sound to the screen again revived interest and by 1932 a regular program was set up by the War Dept within the Signal Corps to produce training films for the Army ground forces During the years from 1932 to 1937 a few films were produced but they were so few in number and so far between that the efforts to make them seemed in vain

In 1937 interest again flared up and this time a regular unit was established consisting of three officers and one civilian with headquarters in the Army War College Washington, D C. This unit under the title of Training Film Field Unit No 1 continued to produce Army Training Films but under difficult conditions due to the limited budget, limited personnel and limited equipment However the worth of the training film was beginning to attract attention and in Oct, 1940 "Training Film Field Unit No 1" moved into an old abandoned building at Neptune City, N J and it was here that the Signal Corps Photographic Center as we know it today actually had its roots, growing from that old abandoned barn into the beautiful and completely equipped studio in Astoria L. I., which is now turning out thousands of feet of film each month and will continue to do so indefinitely

The man who is directly responsible for the rapid growth of this newest branch of the Army's training program is Col M E. Gillette, well known both in Hollywood and the Army as director of the largest program of visual education ever undertaken in this or any other country How well he has done his job can best be answered by a king any soldier of our modern Army It is through these films that he receives much of his training and he is the first to admit it

The S C P C today occupies what was one of the east coast's largest and best equipped professional motion picture studios When the Army took it over in the fall of 1941 it was completely rebuilt according to Army standards to include the housing of its trained personnel The equipment is completely professional and the studio itself is as well equipped or better than any major studio in the land In the Camera Dept can be found the Mitchell Bell & Howell studio models and Eyemo cameras the Akeley Berndt Maurer (16 mm) and the latest type DeBrie Super Parvo Also are included filters of all descriptions wild motors, synchronous motors converter generators exposure meters of the Norwood Weston and General Electric types, Mitchell and Akeley Gyro type tripods lenses ranging from 25 mm to 20 inches and many other pieces of equipment vital in the production of first class motion pictures The Camera Dept is headed by Capt Ray L. Ramsey formerly of MGM Studios and well known in his profession

The lighting equipment consists of both arcs and incandescents of the latest standard studio type Mole Richardson Bardwell McAllister etc

In the Sound Dept there is the Bell and Howell recorder the RCA mixing panel, playbacks, booms microphones and a fleet of mobile sound trucks completely equipped to do recording in the field

In the Editorial Dept and the Cutting Dept there are the Bell & Howell splicers, Moviolas, and the projection rooms boast the latest Simplex Machines and the latest RCA sound

On the stages can be found a camera boom of the very latest Hollywood manufacture and the Special Effects Dept, headed by Lt Lloyd Knechtel well known Hollywood background and special effects cameraman includes the newest mike Teague rear projection machines, rear projection screens, a miniature dept and a special effects dept The Laboratory itself is staffed with some of the finest motion picture technicians to be found anywhere They represent a cross section of the motion picture industry both in Hollywood and in New York

Does being in the Army cramp their style any? Not at all their training has made them realize that by being part of the Army and its traditions they have assumed a new sense of responsibility that they could never enjoy in civilian life and together their concentrated efforts are turning out the finest educational motion pictures made anywhere

The S.C.P.C comes directly under the office of the Chief Signal Officer and is divided into three main groups There is first the Dept of Training Films second the Dept of Film Bulletins and third the Training Division

The Dept of Training Film productions, as its name implies has charge of producing training films for the entire ground forces of the Army Here is how we work

When one of the separate services of the Army such as Infantry Coast Artillery Cavalry etc selects a topic for a training film they submit a picture plan to the General Staff at Washington Here it is either accepted or rejected If it is accepted the film is entered in the year's schedule and an officer is assigned by the branch concerned to prepare a detailed outline of the film and to act as a technical advisor in collaboration with the laboratory staff to make certain every action is authentic and the film will serve the purpose for which intended

With the production under way at the S C P C., the first dept to be assigned to the film is the Scenario Dept where the writers prepare a photographic scenario based on the film plan and compose the commentary which later will be synchronized with the film Every effort is made to produce a film that is clear and to the point All non essential elements such as drama humor, etc are dispensed with they have no place in an Army training film The final script is checked carefully and a study of all the factors involved is made These include cost locations, time schedules etc

When all these are approved the actual shooting of the picture begins

A camera crew headed by a unit manager and a director (usually commissioned officers do this work) and a first cameraman together with his assistants, utility men script clerks are assigned to film the final script When all details are complete equipment is drawn with particular emphasis on the type of picture to be made and the complete unit proceeds to location Equipment carried by field crews of this kind are two Mitchells, a Bell & Howell studio model if backgrounds are to be made, converter generator and synchron

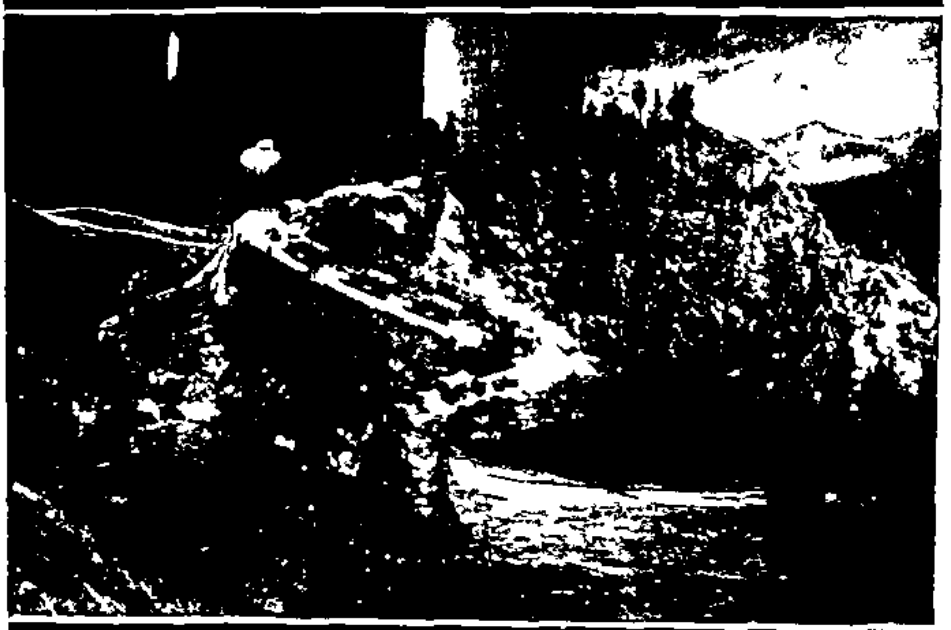
ous motors if live sound is to be recorded and of course a mobile sound unit Booster lights arrive at location with their own power supply if needed exposure meters of the type the cameraman prefers (these are constantly calibrated in the laboratory to insure perfect results) tripods Speed Graphics filters typewriters and any other equipment the cameraman feels he needs to produce pictures of the standards the S C P C demands Location is usually an army camp where the desired type of activity for the picture can best be photographed Carefully selected soldiers and



Building miniature of harbor and docks later to be blown up in an air raid also in miniature

equipment are placed at the disposal of these units and the work of filming the picture proceeds At the present the S.C.P.C. is not equipped to process its own film so each day s work is shipped to some commercial laboratory either in New York or Hollywood depending on the nearness to the location

Invariably in all training films the action calls for the showing of the inner workings of the most intricate machinery where it is impossible to photograph All action such as this is done in our completely equipped Animation Dept which is staffed by some of the finest artists and animators anywhere Oftentimes hundreds of drawings are required for one bit of action that may be just a flash on the screen



Miniature set constructed to match certain exterior shot at Lake Arrowhead It did

Titles are done in the Art Dept which works in harmony with the animation

Rushes are viewed in the Laboratory and sent to the Cutting Dept where the project officer supervises the editing and assembling of the hundreds of individual scenes All retakes and added scenes are shot after a rough cut is viewed The final cut goes to the Recording Dept where the live sound sound effects and commentary are dubbed in The final prints are released in both 35 mm and 16 mm to all Army camps where the Signal Corps detachment of each camp is in charge of their distribution

A new man going out on his first assignment is amazed at the efficiency and attentiveness to duty that is shown by the officers

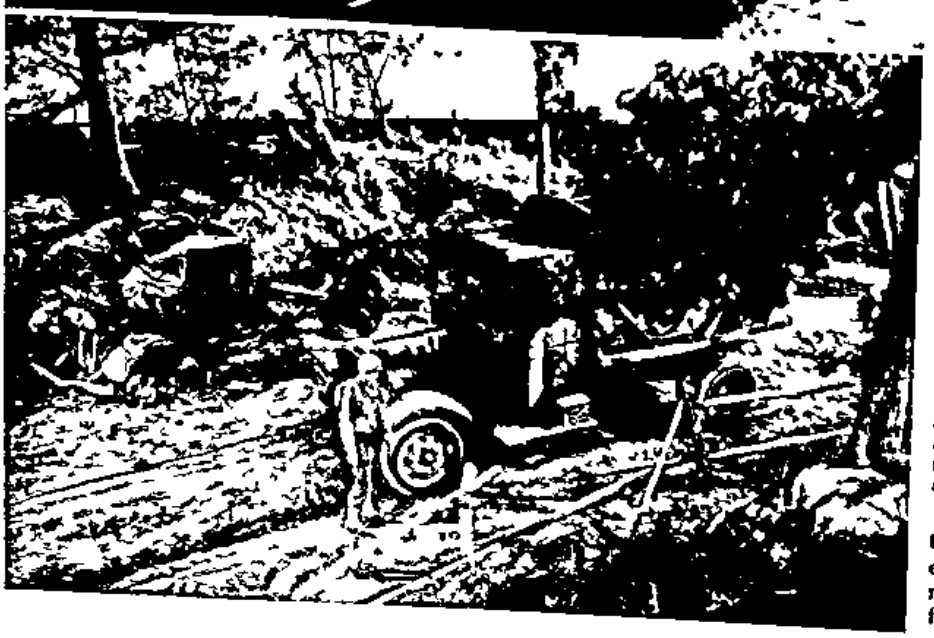


Interior set of a battlefield Note shell bursting on the right

and men concerned This is the Army, we re under military law and discipline and entitled to no special rights and privileges and needless to say we re never trou







Actual shooting of an interior Author calls attention to professional studio technique

The "jeep" makes an excellent dolly in an emergency

Looks real, doesn't it? But it's actually done inside on one of the big sound stages Surveying captured German equipment for a scene in a training film

lled by strikes and threats of strikes Yes the Army has taken the glamour out of motion pictures and replaced it with good common horse sense

Another branch of the S.C.P.C. is the Dept of Film Bulletins This dept has charge of securing pictorial records of vital d ings for the Army's personal records. This is really the newsreel section of the laboratory and its cameramen cover the earth to record events of national and international interest Some of the events recently covered by this dept are General Brehon Somerville's visit to Detroit to survey war production trial of the Nazi saboteurs in Washington graduation exercises at the U S Military Academy at West Point, arrival and departure of troops into the fighting zone and many other events including the releasing of propaganda films to further the Allied cause According to a plan now under surveillance these films are soon to be released through all War Department theatres throughout the country where they will be viewed as newsreels and short subjects

This dept has its own cameramen cutters, film editors, writers and technical men and is one distinct part of the S.C.P.C. Recently this dept has been put in charge of handling all the film shot by all other field photographic units of the Army Yes the Dept of Film Bulletins is an important one indeed

Another interesting dept of the S.C.P.C. is the "Training Division" Its function is to train motion picture and still cameramen for the Army ground forces

Men are selected for this training by a liaison officer from S.C.P.C. who interviews men at the two Signal Corps replacement centers at Camp Crowder, Mo., and at Fort Monmouth N J Men selected for this course must have sufficient photographic knowledge and exhibit marked enthusiasm for this type work From my own observation of the men now undergoing this training at the Laboratory the selections have all been top notch The training course is from 6 to 13 weeks under the very best instructors available who teach them complete newsreel coverage of an event under different conditions These men upon graduation are then sent to some field unit wherever they are needed usually

MICROFILM FOR COMMERCIAL USE

By Hugh H. Gwynne

One of the more recent applications of photography is Microfilming

This term describes a system of photographic copying on a greatly reduced scale Blueprints original line drawings books, paintings, newspapers and all commercial documents of every size and description are being microfilmed

This valuable and interesting use of photography is opening up wider fields every day in commercial and scholarly lines In the educational field it has already proven its use in disseminating rare research material to scholars that would formerly have been available only at a great cost During the recent Spanish Civil War it has been the means of saving valuable books in the Spanish library in Madrid In England at the present time, it is being used to preserve famous libraries This work is being accomplished in deep underground locations in Wales

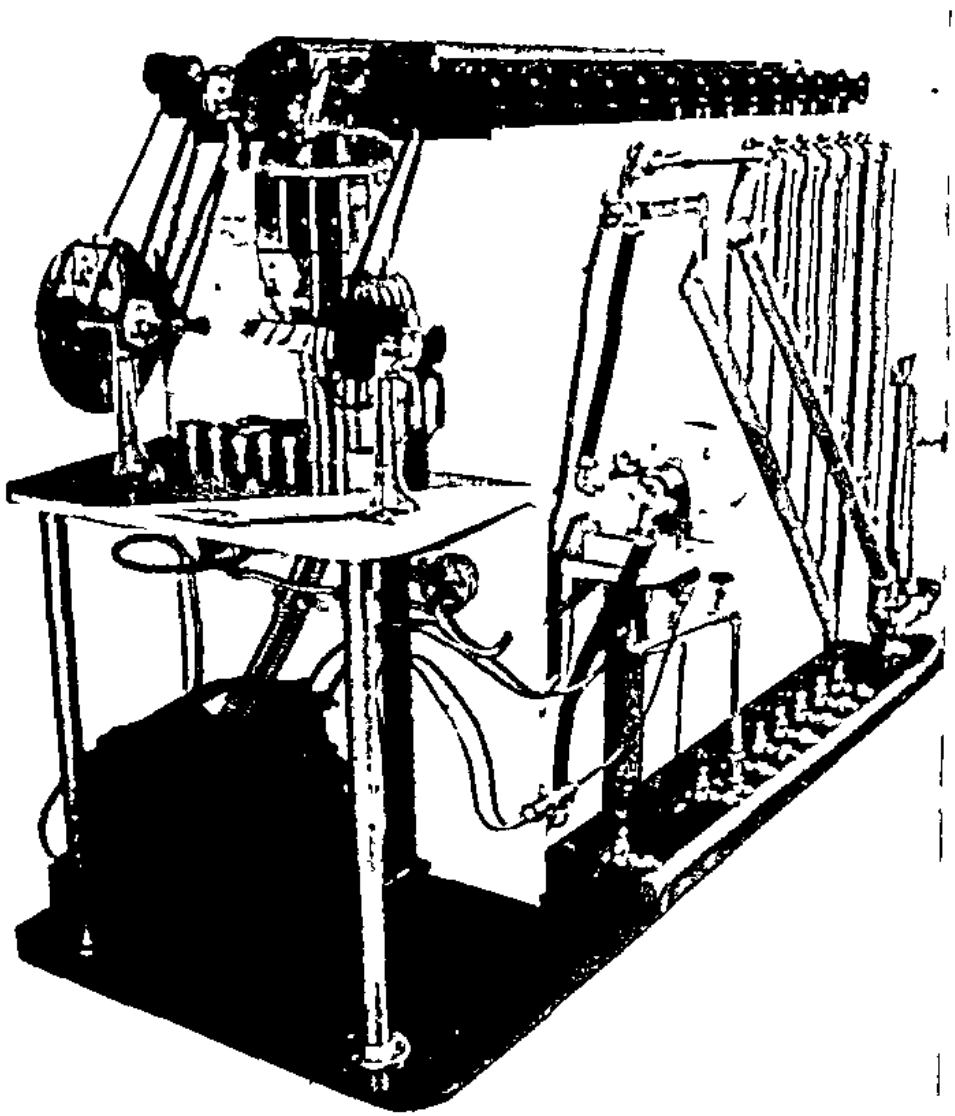
The commercial applications are being used by the United States Government for saving enormous storage space and for permanent insurance against loss of documents Thousands of large industrial plants and similar industries are using microfilming as a system of bookkeeping for daily, monthly and yearly inventories as well as for the safekeeping of other records The application of microfilm is unlimited wherever records or documents of any kind are in use

While the basic principles of photography are used, there are several points which need to be noted if certified Microfilm is to be the result

The lens system must be of the highest resolving power obtainable Special film manufactured expressly for this work should be used This film as now manufactured has far greater resolving power than any lens system available

The developing must be carried out to a very close margin due to the high contrast and resulting narrow limit of latitude in this work The elimination of the hypo by washing must also be carried much farther than existing necessity in the general uses of film

The illustration of a Microfilm Developing Machine shows that the wash system is from two to three times greater than general practice requires Seven separate wash tanks are provided to accomplish sufficient washing for Microfilm This process presents a highly practical time, labor and space saving procedure for everyday commercial use



Hugh Gwynne Microfilm Developing Machine, U S Patent 2,102,843

into some combat group and it is these men who accompany our fighting forces into battle armed only with a camera and film those impossible scenes that are seldom released to the public These men are just as much heroes as the pilots who fight in the sky or the men on our submarine or aircraft carriers Their is an impossible task and the only by line they ever get is a caption 'Photographed by the U S Army Signal Corps. Their record is not one of personal glory but together their combined efforts have provided the U S Army with the finest collection of still and motion picture records ever assembled

In writing this article I have tried to put down in words a vivid description of one of the least known branches of our modern army It has been referred to many times over We here at the S C P C are just beginning to realize how right Confucious was when he said many centuries ago 'One picture is worth ten thousand words"

OUR MEN NEED BOOKS

GOOD BOOKS ARE ON THE MARCH from your bookshelves to our fighting men Get them out— leave them at the nearest collection center or public library for the 1943 VICTORY BOOK CAMPAIGN



1 Jane Brown (Priscilla Lane) is in love with Richard Clark (Jack Benny) Her banker father (Mat Briggs) prefers wealthy Bill Potts (Lee Talbot)



4 A failure in his own town and broke in New York, Richard tells Shuf that he must make good for Janie's sake



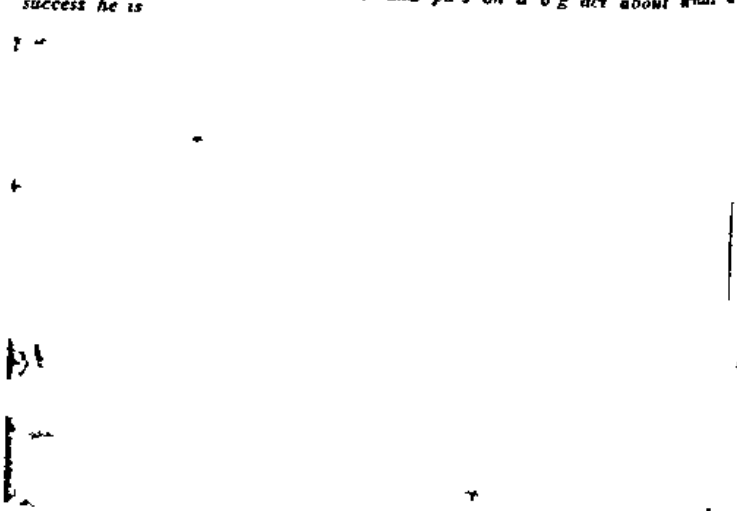
2 Richard acts as Brown's attorney when a farmer wrecks his car He gets soft hearted and loses the case Brown persuades him to go to New York (hoping never to see him again)



5 Then Jane and her father arrive for a visit Richard "borrows" a Park Avenue apartment takes them there and puts on a big act about what a success he is



3. In New York Richard would have starched his faithful valet Shufro (Eddie "Rochester" Anderson) didn't cook in the swanky offices.



6 Shufro tells Richard he's too soft hearted and asks him to try and be mean Richard makes a start by not dropping a coin in the blind man's cup



He insults several people by way of practice. An outraged newspaper photographer catches him taking a big fall pap away from a young lover



10. Back in Pottsville Janie reads about the publicity he's getting as "the meanest man" and rushes to New York to see him



8. Headlines call him "The Meanest Man in the World" but he sneaks back late to make good with the kids



11. Richard when asked for an explanation pleads his case but it's no good. He takes him on the chin—literally



9. Clients flock to his office. He evicts a sweet old lady from her home but secretly gives her a better home



12. When James father arrives he insists on an immediate wedding. Janie is happy. Shufro and the old lady have told her all about "the meanest man"

NAVY ESTABLISHES NEW LAB

Navy to Establish New Photographic Laboratory at Washington Air Station

A new Naval photographic laboratory which will house the most modern and efficient facilities available in the world today and be staffed by some of this country's finest photographic technicians will begin operation soon at the Naval Air Station Anacostia Washington D C

The new laboratory to be known as the Naval Photographic Science Laboratory, will become the nerve center of all the far flung and diverse photographic activities of the Navy As the parent laboratory it will set the standards for all photographic laboratories of the navy It will supervise the training and assignment of skilled photographers and technicians to fleets and shore activities It will check and test aerial and motion picture cameras and all other Naval photographic equipment It will make new technical developments and improvements in equipment, operation and training

In this laboratory secret and confidential documents will be micro filmed aerial reconnaissance photographs, which tell of enemy position enemy damage and probable enemy movements will be studied and evaluated films of Naval engagements and combat action will be kept available for current use and future record

Constructed at the direction of the Secretary of the Navy to handle all photographic problems for the entire Navy the new laboratory will fill the photographic requests of all bureaus and naval establishments Initially it will be staffed by nearly 700 Naval personnel made up almost entirely of specialists Many of the finest expert in the field of photography have been drawn from the motion picture industry and from leading manufacturers of photographic equipment to participate with trained Naval personnel in performing the laboratory's highly specialized work

In order to release officers and men for fleet duty it is anticipated that members of the Women's Reserve will fill a substantial number of the positions. According to present plans over 200 enlisted women and 20 officers of the Women's Reserve who are skilled in photography will be stationed at the laboratory

A photographic interpretation school will have facilities for training double the present output of officers for this work

Approximately 85 of the Naval personnel of the laboratory will shortly begin a special course of training that will be given by Eastman Kodak Company at Rochester N Y This training will cover operation of some of the laboratory highly specialized processing equipment. This particular equipment which has heretofore never existed outside the premises of the Eastman Kodak Company is being duplicated for Naval use at Anacostia These men will complete their training in time to join the staff of the Naval Photographic Science Laboratory when it begins operation

The laboratory which has been designed and engineered for the Navy by the Eastman Kodak Company in collaboration with the Bureau of Aeronautics, will be housed in a building air-conditioned throughout, and containing fire and explosion proof vaults The building will contain three types of air-conditioning comfort conditioning for office areas, processed conditioning for photographic film processing and handling rooms and special conditioning for storage of high speed photographic stock

With the establishment of the laboratory, the Navy for the first time will have a centralized and unified photographic branch The importance of this step is highlighted by the fact that approximately nine-tenths of Naval photography is used for technical purposes including combat photography identification mapping observation reconnaissance, spotting photo triangulation training recruiting historical record and entertainment The Navy uses photography to record fleet maneuvers for tactical studies to capture the flight of projectiles and their ability to penetrate armor plate to make photographic records in color of medical research work, to provide progress records of the construction of ships and yards and docks and even to record the movement of the stars for the Naval Observatory

In addition to these technical uses the Office of Public Relations handles about 1 000 photographs a day as well as motion picture films, all of which are designed to acquaint the public with what the Navy is doing

If you are interested in joining the Naval Photographic service please write Lt Dewey Wrigley Naval Photographic Science Laboratory Anacostia Washington D.C



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Hollywood, California, U S A

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IN A GREAT MOVIE THEATRE *an audience of thousands —carried out of their everyday lives—look and listen, to the drama pouring from a strip of photographic film about one inch wide Everything is on this—not only the living moving scenes of the story but on the tiny "sound track" at the left the sound whispered words of love a terrified scream the nerve shattering roar of a dive bomber an enchanting voice crooning a lullaby Film carries it all*

Most Hollywood movies are on film made by Kodak

FROM the time when Thomas A Edison and George Eastman worked together on the early, flickering movies, the improvement of materials for professional motion pictures has been one of the chief fields of Kodak research Kodak has been the pacemaker, and is by far the largest supplier of Hollywood

From "the flickers" to art

Kodak's original production of transparent roll film, the key to motion pictures specialized negative and positive films the production of high speed panchromatic materials the modern color phase, now rapidly expanding these are important scenes in the advance from "the flickers" to today's work of art, in which Kodak has played a leading role And there is another . The success of "sound" pictures hinged on making the spoken words, or music, or "sound effects," a basic part of the picture That is what you have today, because

Sound, too, is pictured

With special fine grain emulsions, Kodak "sensitizes" film for sound recording In effect, sound is changed into light, and this light is recorded on the film, simultaneously with the recording of the scenes Lips move—a voice speaks Yet the voice is also a "picture"—an effect of light on film The voice changes from a whisper to an angry roar—each tone is a series of "light" pictures, different in quality.

As you sit in the theatre, the process is reversed—the "light pictures" on the sound track are changed back into *sound* The "*sound*" *newsreels* are made in much the same way

Movies for everybody

For children, movies are education For normal men and women they are the grandest form of entertainment, reaching almost everyone For those distraught by worry or sorrow, they are wholesome escape For our service men on ships or in distant camps, they are a little of everything that is needed to give a man a "lift" Eastman Kodak Company, Rochester, N Y.

Serving human progress through Photography

This institutional advertisement is one of a series covering a wide variety of Kodak products and services It appeared in December popular magazines read by millions

"Highly unorthodox cruise"

Member R R (Bob) Rhea Helped Destroy German Tanks and Returned with Movies of Battle

Chief Petty Officer R R. (Bob) Rhea together with two other members of Commander John Ford's combat film unit, soon after the capture of Algiers arrived at Bone just after the sirens sounded. Their adventures from there on are best told in the following cable of Robert P Post to the *New York Times*

"Obtain Delivery Van

"The next day they obtained a new French delivery van, which they had found in a garage with batteries, which they had talked out of the adjutant of a British regiment. The clad themselves in British battle dress, United States Navy flying jackets, United States Marines leggings, British issue boots and United States steel helmets They loaded their van with motion picture cameras and film, three tommy guns a supply of ammunition and a box of hand grenades. They also obtained, by special pleading rations for six officers and twenty nine men from a British depot officer

Thus equipped, they set out for the front, considering themselves somewhat lucky because while they had been hunting transportation they had heard two United States generals arguing over who was to acquire one jeep

"The first day they made about 200 miles uneventfully The second day they had their first taste of German planes which had at that point complete air superiority

"Rhea was sitting on a box at the rear of the truck, with instructions to beat on the body three times if he saw planes,' Lieutenant McClain said. When he did see them we were all in a ditch before the second beat.

"The three men had various adventures with French soldiers, and, in a deserted Algerian farmhouse before and after having been heavily bombed and cut off by German tanks, they linked up with a battery of British 25-pounders about a mile from Tebourba.

"Take Pictures of Action

"This group dealt faithfully with a few German tanks at a range of 600 yards Lieutenant Pier and Chief Petty Officer Rhea managed to set up their cameras on a hill above the battery position and recorded the action involving some thirty three German tanks, in what they hope are good pictures

"Meanwhile Lieutenant McClain, who was along as a writer was pressed into service by the commander of the British battery to assist with the wounded That night all three United States Navy men served as sentries over the battery which had lost about half its strength in the battle

"German parachutists and tanks had all but cut off the position which was, to say the least, somewhat fluid.

"Chief Petty Officer Rhea ran into a delicate situation when, as a guard he tried to halt two American sergeants One of them, having expected to meet British troops and taking Chief Petty Officer Rhea for a German parachutist, shoved a tommy gun against his stomach. Chief Petty Officer Rhea then offered the explanation that he was in the United States Navy

"Eventually after having remained with the battery for some time the unit was ordered back from its highly unorthodox cruise'"

PATENTS

By ROBERT W FULWIDER, *Patent Attorney, Los Angeles*

No 2,301 433—Method of Removing Opaque from Photographic Negatives. *Leslie E Whittenberg* assignor to Eastman Kodak Co

No. 301 740—Plural Lens Mount *George S Monk* et al assignors to Prismacolor Inc

No 2,301 911—Control System for Motion Picture Apparatus. *Charles L. Lootens* et al, assignors to R.C.A.

No. 2,302,277—Diazotype Dry Development Apparatus. *F W* ton Meister assignor to General Aniline & Film Corp

No 2,302,507—Variable Density Window *W H Ryan* assignors to Polaroid Corp

No 2,302,534—Combined Range and View Finder Having Parallax Correcting Means. *Oscar Steiner* assignor to Folmer Graflex Corp

No. 2,302,597—Camera with Built in Photoelectric Exposure Meter. *J W Bing*

No 2,299 906—Light Polarizing Material Coated with a Photosensitive Layer. *Edwin H Land* assignor to Polaroid Corp

No 2,299 990 — Photographic Print Dryer. *John Paul Jones*

No 2,300 484—Motion Picture Projection System *F T Bodwitch* and *P A Marshal* assignors to National Carbon Company Inc

No 2,300 970—Apparatus for Printing Subtractive Multicolor or Images *Kurt Riess* et al, Germany assignors to General Aniline & Film Corp

No 2,301 013 — Making Photographic Silhouette Records. *Stewart De Motte Brown* Eng., assignor to Technicolor Motion Picture Corp

No 2,301 114—Optical Projector *Victor S Fox*, et al assignors to Farrell

No 2,301,387—Reducing Aerial Oxidation of Photographic Developers. *Ralph M Evans* et al assignors to Eastman Kodak Co

Bover Revives Producer-Star Idea in Films

Looming imposingly among the developments of 1943 on the Hollywood front is a hyphenated composite which has long been virtually absent from its personnel directory It is the star producer

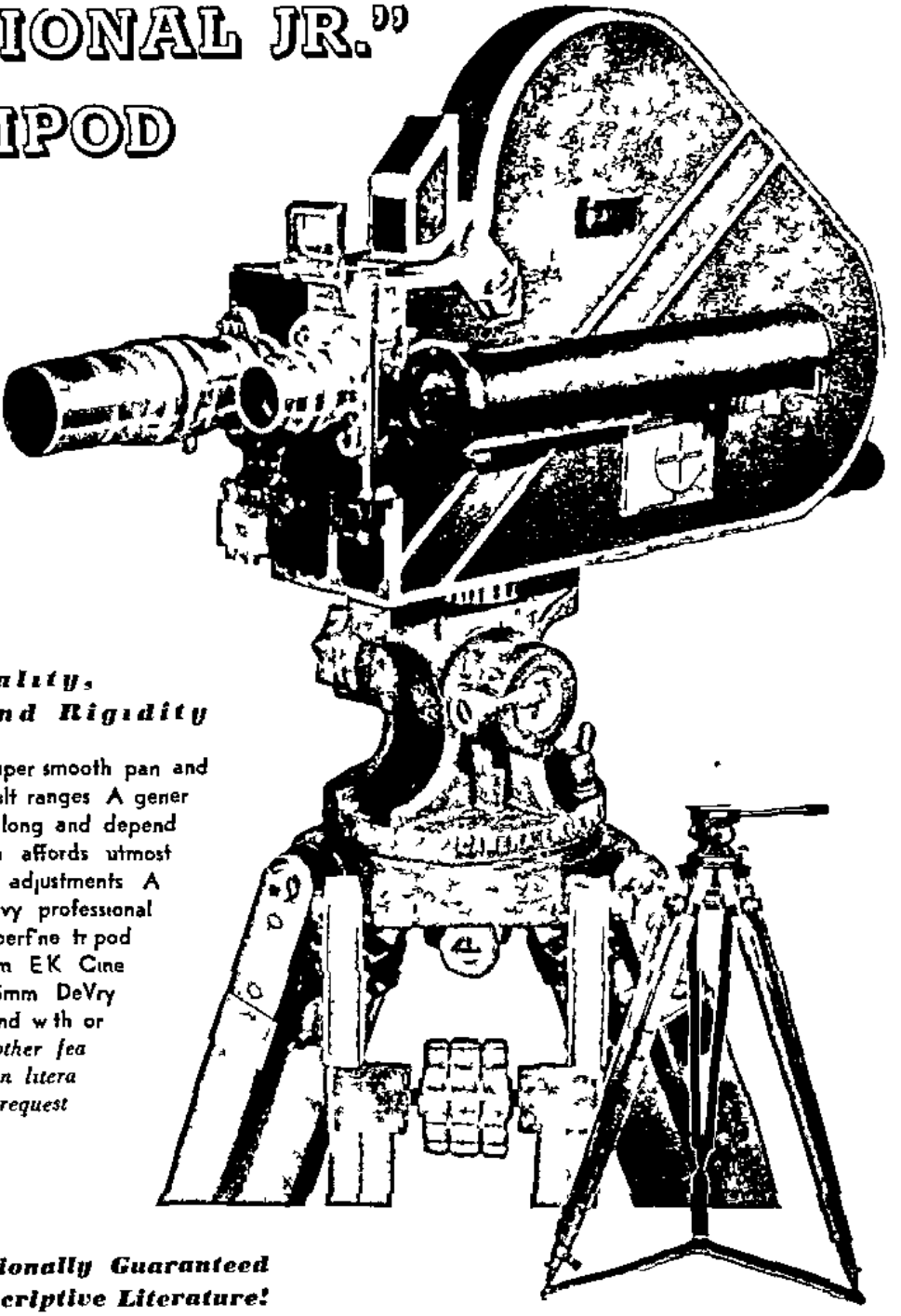
A little over a decade ago when sound caused far reaching changes throughout the film industry the star-producer slipped into the discard Such notables as Douglas Fairbanks Charles Chaplin, Mary Pickford and Harold Lloyd had been its vanguard

Signs of the renaissance of the star producer dawned late last year and predictions extant are that at least a half-dozen topflight silversheet personalities will assume production control of their before-the-camera efforts during the current year

Heading the star producer revival is Charles Boyer who climaxed a decade of acting in American films a few months ago with an affiliation with Universal studios to produce pictures as well as star in them. Almost simultaneously James Cagney broke off a long association with Warners to set up his own producing unit with another company

Jack Benny followed suit and reliable reports have it that several others are considering similar ventures Mentioned prominently are Gary Cooper Ronald Colman and Errol Flynn

"PROFESSIONAL JR." TRIPOD

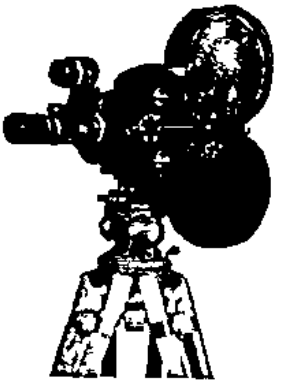


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Tripod Head Unconditionally Guaranteed 5 Years. Write for Descriptive Literature!

Professional Jr tripods are used by leading Newsreel companies, 16mm and 35mm motion picture producers the U S Government—Signal Corps Navy Department and Office of Strategic Services—for important sound and silent work



Above—Collapsible and adjustable telescoping metal triangle. Extends from 16½" to 26½". Has wing locking nuts for adjusting leg spread and stud holes for inserting points of tripod feet. Triangles prevent damage, insure cameramen that their equipment remains in correct position and will not slip on or mar any type of surface.

Left—35mm Eyemo with motor and 400 ft. magazines mounted on "Professional Jr."

FRANK C. ZUCKER
CAMERA EQUIPMENT CO.
1600 BROADWAY NEW YORK CITY

Restrictions on Overseas Mail to Army Personnel

Order No. 1968 , Dated January ", 1943

The War Department has informed the Post Office Department that in view of the heavy demand being made on cargo space for military shipments and because of the limited facilities available to commanders of theaters of operations for delivery of mail, the volume of mail dispatched to overseas destination must be kept to a minimum. Therefore in accordance with the recommendations of the War Department, the following restrictions on mail for Army personnel addressed to A.P.O. overseas other than official shipments and shipments to military agencies, shall become effective January 15, 1943.

1. No parcel exceeding 5 pounds in weight, or 15 inches in length, or 36 inches in length and girth combined, shall be accepted for dispatch to A.P.O.s overseas for individuals. (It is contemplated that there will be no exceptions to the weight and size limits for parcels to individuals.)

2. Except as hereinafter provided, no parcel shall be accepted for dispatch to A.P.O.s outside the continental United States unless they contain such articles only as are being sent at the specific written request of the addressee approved by the battalion or similar unit commander of the addressee.

3. Individual copies of newspapers or magazines shall be accepted for dispatch to A.P.O.s outside the continental United States only where subscriptions are specifically requested in writing by the addressee or for which subscriptions are now in effect. Such copies to individuals shall be accepted only from publishers who shall place on the wrapper or on the publication when a wrapper is not used, a certificate (which shall be regarded as sufficient to authorize their acceptance) reading as follows:

"Mailed in conformity with P. O. D. Order No. 1968."

4. No circular matter of the third class should be presented for mailing to A.P.O.s overseas as the War Department advises that it will not be dispatched from ports of embarkation.

5. V-mail will be transmitted either when microfilmed or in its original form, to all A.P.O.s overseas and transported by airplane where such facilities are available. Although letters prepaid at the airmail rate of 6 cents per half ounce will continue to be transported by airplane as far as the ports of embarkation the War Department advises that no assurance can be given that such letters, other than V-mail, will be dispatched by airplane from ports of embarkation to localities overseas served by V-mail.

Referring to restriction 2 above the War Department states that individuals serving overseas desiring to request the mailing of parcels to them will be required to include in their request the following:

1. A general description or name of article requested.

2. The grade or rating, the complete address and the signature of the individual (addressee) making request.

The request will be presented to the battalion or similar unit commander who will approve it when the circumstances justify. Requests of officers not assigned to organizations or separate units will be approved by the next higher or theater headquarters. In case the individual making the request is a civilian, the request will be approved by the commanding officer of the installation concerned.

Parcels addressed to individuals at A.P.O.s overseas must be accompanied with the approved written request from the addressee as above set forth when presented for mailing. The request shall be postmarked by the accepting employee in such manner as to prevent its reuse and then be returned to the sender.

Discontinuance of Insurance and C.O.D. Services and Curtailment of Registry Service for Army Personnel

No matter addressed to members of the armed forces or other persons receiving mail through A.P.O.s overseas shall be accepted as insured or c.o.d. mail.

Similarly letters or packages containing money or other articles of value except valuable papers addressed to members of the armed forces at such overseas A.P.O.s, or to other persons receiving mail through such A.P.O.s, shall be refused registration. However, letters containing valuable or important papers may be registered. No postal indemnity will be paid in connection with registered letters containing the valuable or important papers. The public should be warned that it is not advisable to inclose currency in ordinary letters and the use of money-order service for remittances recommended.

General Instructions

Mail addressed for delivery to A.P.O.s outside the continental United States shall embrace all that which is addressed to such A.P.O.s in care of the postmaster at New York, N. Y., San Francisco, Calif., Seattle, Wash., New Orleans, La., Miami, Fla., or Presque Isle, Maine.

Mail of any character originally addressed to individuals at Army posts, camps or stations in the continental United States and received at such places after departure of the addressees for an overseas destination will be forwarded.

The restrictions of this order apply only to personnel of the United States Army and to contractors and civilians served through A.P.O.s outside the continental United States. They do not apply to mail for personnel of the Navy, Marine Corps, or Coast Guard, nor to international mail which will continue until further notice to be subject to the provisions of Order No. 1741 of April 20, 1942, and the general permits thereunder insofar as applicable.

None of the restrictions in this order apply to official shipments and shipments to military agencies overseas nor to any mail from A.P.O.s outside the continental United States to points in the United States.

Postmasters shall return to the senders, marked "Dispatch prohibited by Order No. 1968," any prohibited matter obviously accepted for mailing after January 15, 1943.

This action is prompted by military necessity and it is believed that the public will cheerfully comply.

OUR MEN NEED

★ BOOKS ★



SEND

ALL YOU CAN SPARE

GIVE A BOOST WITH A BOOK—Good books, in good condition, are wanted by the 1943 VICTORY BOOK CAMPAIGN for men in all branches of the service. Leave yours at the nearest collection center or public library.

New Weapon

(Continued from Page 3)

who fortunately enough had been trained before he enlisted.

Material is now coming in from Africa being photographed not only by war correspondents there but by Naval cameramen, Signal Corps cameramen and Army Air Force cameramen. The Army Air Force cameramen were recruited last, but they have worked so intensely to establish their personnel with men spread out all over the country that they undoubtedly will send in a vast amount of valuable material.

Pictures now coming in from Guadalcanal were photographed by a trained Marine cameraman. These films are of high quality and it is apparent that the Marine Corps some time ago realized the importance of photography. Quite evidently what then seemed to be wasted labor has proven in times like these to be anything but "labor lost."

Watching the reels one begins to see what has taken place on the tremendous 1200-mile Russian front, the part women are playing in the war and the bravery of the men who are dying to defend their land. The documentary film "Moscow Strikes Back" is a combination newsreel and short dealing with fighting on the front and the morale of the Russian people. This is an excellent example of the power of the motion picture and the influence it wields over the millions. A newspaper could not have done so fine a job.

Week by week the coverage improves. Photography has proven its value but tribute must be paid to the courage and pluck of the cameramen of the United Nations whose daring have made it possible to satisfy the hunger for visual news.

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With Hyman Fink

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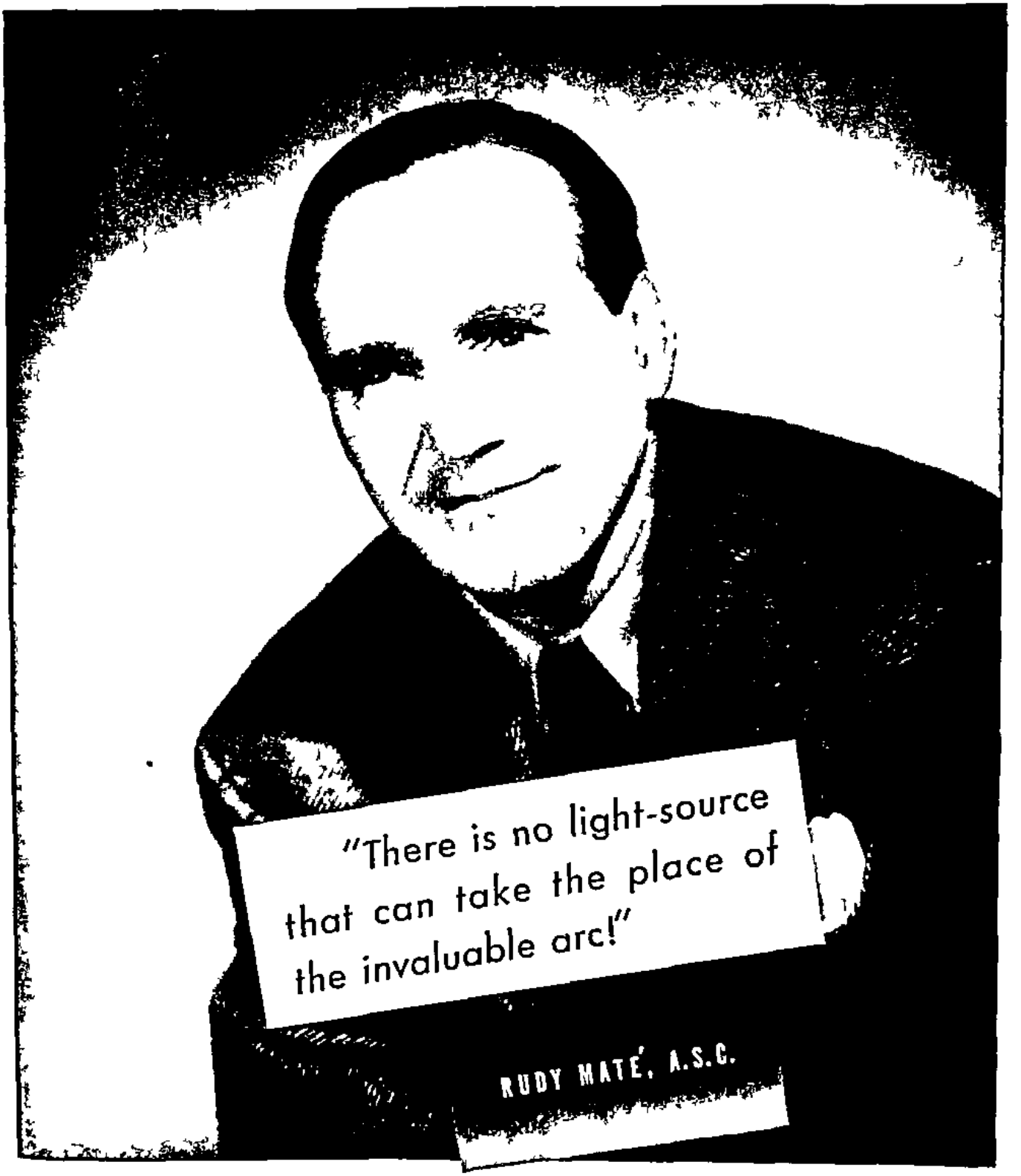
B ll Lund gan looks env ously at the plate of Meryle Pye Is that a steak among those beans? Martha O Dr s coll sm les and looks the other wav Maybe she reecived a lucky number for meat earl er n the day Thev re at Ciro s



Can t see what Paulette Goddard and Charl e Chapl n had at the Mo cambo Anyhow Paulette s empty plate looks as f t had been all r ght



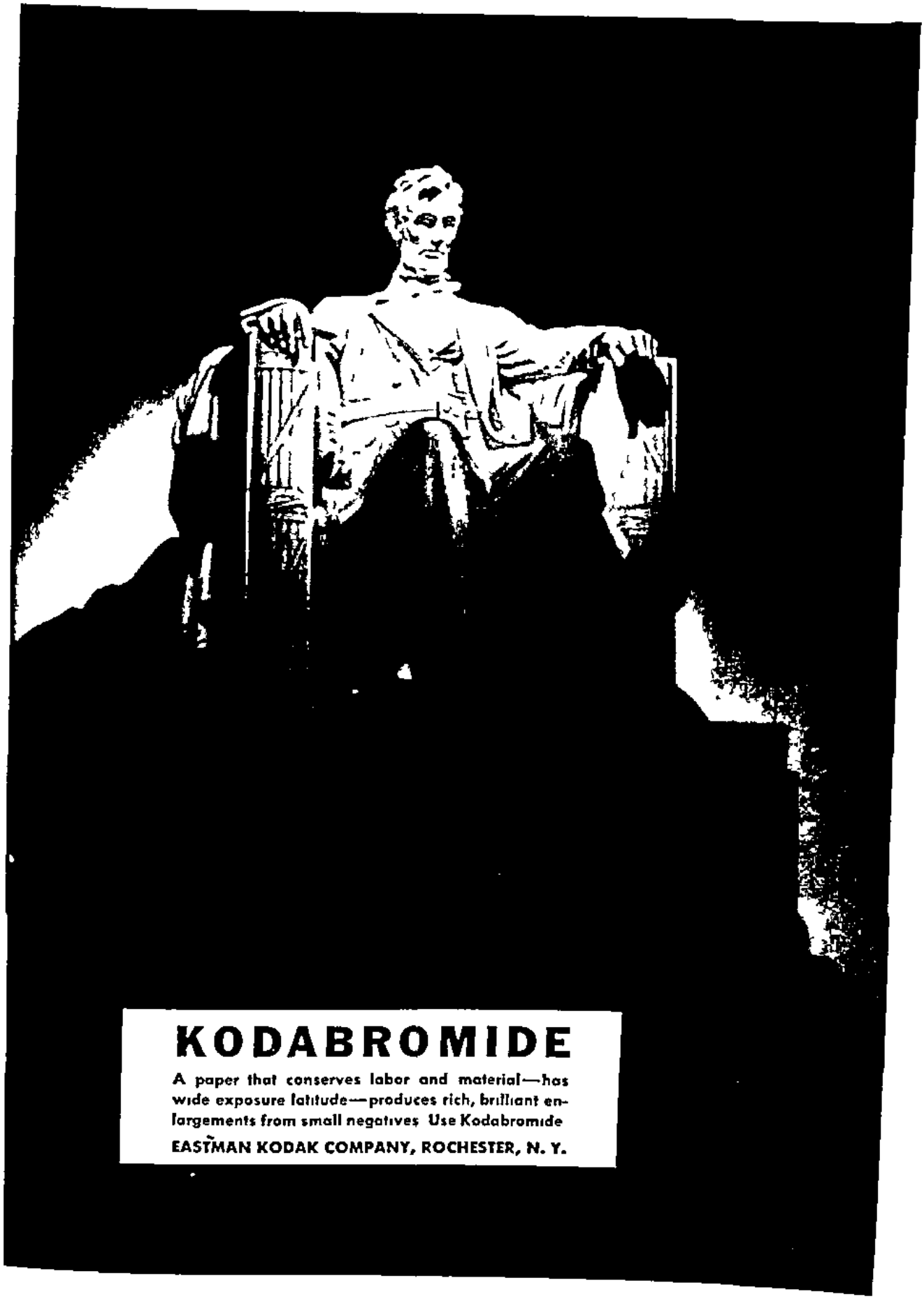
Bob Sterl ng and Ann Sothern are just fin sh ng the r coffee at C ro s so we're too late to find out f thev had steak



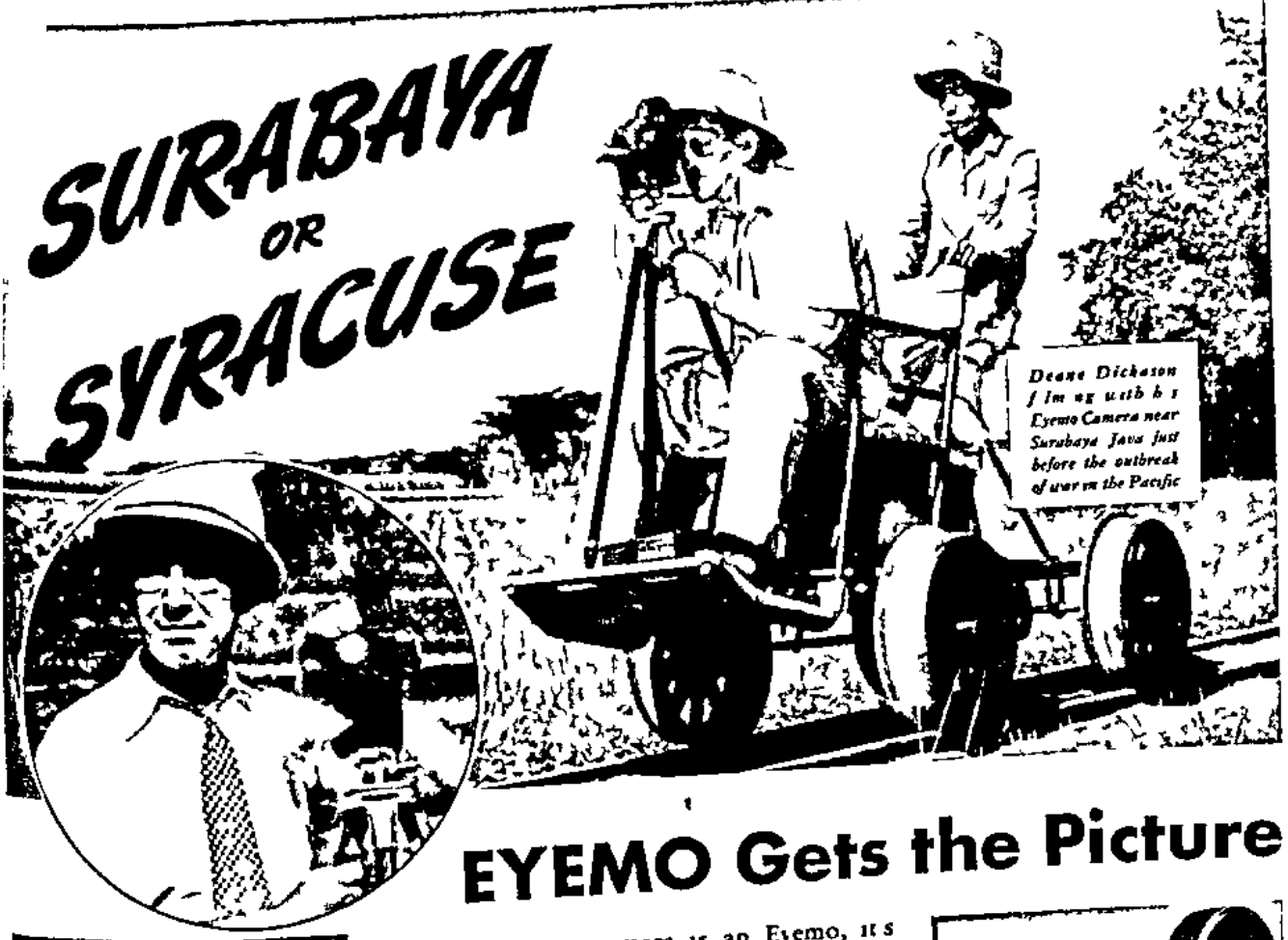
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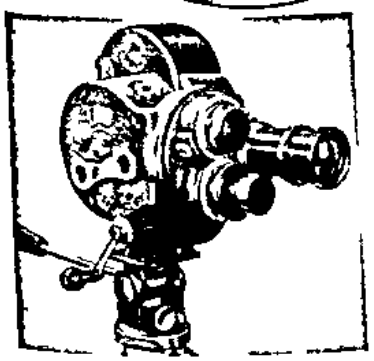

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Deane Dickason filming with his Eyemo Camera near Surabaya Java just before the outbreak of war in the Pacific

EYEMO Gets the Picture



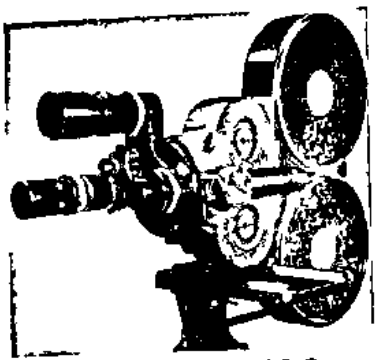
EYEMO MODELS L AND M

These models have the compact type of three lens turret Viewfinder is matched to six lens focal lengths by turning a drum shows sound field to match camera's sound aperture plate Operating speeds Model L—4 to 32 frames per second Model M—8 to 48

WHEN your camera is an Eyemo, it's always ready to go into instant action on any type of assignment anywhere

Because of the versatility and *dependability* of Eyemo Cameras mechanically and as to picture quality, they're first choice with most cameramen on news fronts the world over

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EYEMO MODELS P AND Q

Most complete of the seven standard models Have three arm offset turret prismatic focuser with magnifier and provisions for electric motor and external film magazines Speeds Model P—4 8 12 16 24 and 32 fps Model Q—8 12 16 24 32 and 48 fps

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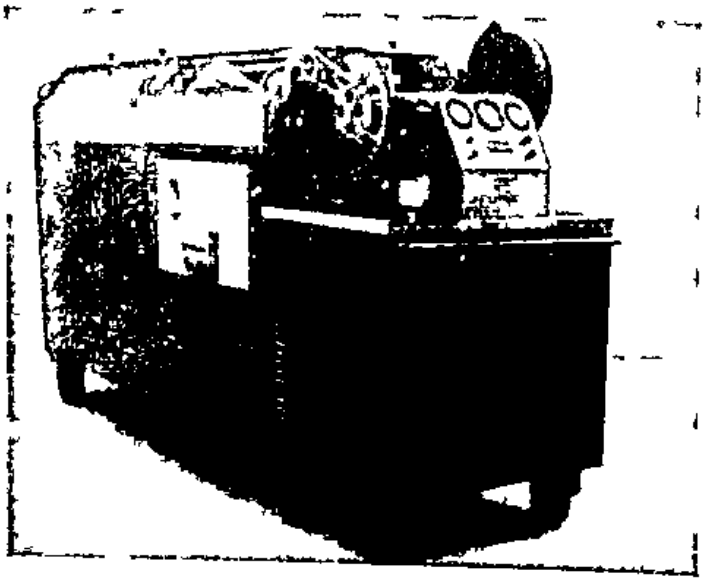
when the film is

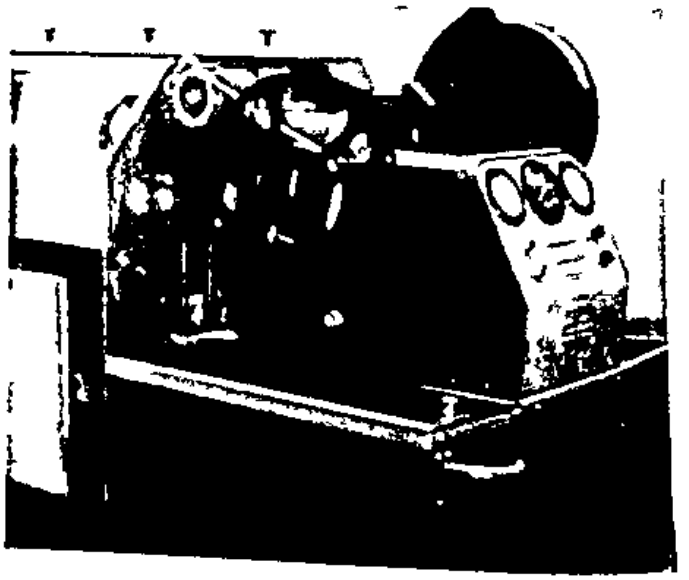
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THE HOUSTON 35 MM SPECIAL PURPOSE FILM DEVELOPING MACHINE

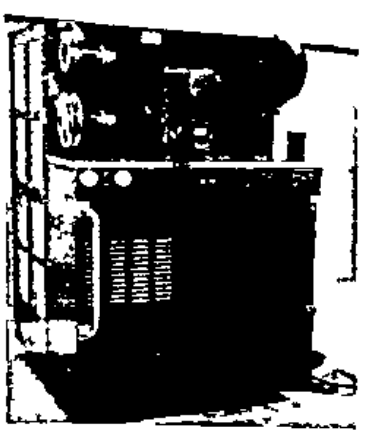
Spec al purpose means that th s ma ch ne was designed for use in a l m ted space Its d mensions are 78" h gh 48" long by 42" wide

E ther Nega ve or Posit ve film can be developed on th s machine Su t able pumps have been arranged to facil tate loading and unloading of solut ons as well as opera e proper tur bulation to e ther developer

Th s machine is white l ght operated as su table light t ght magazines are suppl ed It is equ pped w th variable speed transmiss on giving a range of film footage of 500 feet per h our to 2000 feet per hour

The Dryer Compartment is equipped with Infra red lamps for drying the film. Sections can be cut n or cut out as des red to suit a mospheric cond t ons

The electrical load is 13 K V A at 220 volts



THE HOUSTON 16mm NEGATIVE, POSITIVE AND REVERSAL TYPE FILM DEVELOPING MACHINE

This machine was designed and manufactured to serve a three fold purpos that is the developing of Negative, Positive and Reversal film in or machine

Provisions have been made to by pass the film from positions desired fo any of the operations in a novel and practical way so that final results wi be comparable to operations on a machine designed for a single purpos The machine is of rigid construction and is a portable type, being set o casters and can be readily moved to any desired location It is white ligh operated All controls such as Electric Heating Exposure Lamps, Pump for turbulation of Developer, Filtering of the Water Chemicals and Wate Drains are all incorporated in this machine

Electrical load is 12 K V A at 220 volts Electrical specifications will satisfy any power requirements Most excellent photographic results have beer obtained from this machine

●

These machines are completely self conta ned requiring no additional equipment and are crated and shipped completely assembled.

These most modern Film Develop ng Machines can be supplied through high priority rating

For detailed information write